

FACT SHEET

**Proposed Renewal Operating License for
The Dow Chemical Company, Michigan Operations
Hazardous Waste Treatment, Storage, and Disposal Facility
and
Major Operating License Modification for
The Dow Chemical Company
Salzburg Road Landfill**

Midland, Michigan

MID 000 724 724

MID 980 617 435

October 7, 2002

**Michigan Department of Environmental Quality
Waste and Hazardous Materials Division
and
Remediation and Redevelopment Division**

BASIS FOR PROPOSED OPERATING LICENSE ISSUANCE AND APPROVAL OF A MAJOR OPERATING LICENSE MODIFICATION

The Michigan Department of Environmental Quality (MDEQ) proposes to issue an operating license to The Dow Chemical Company (Dow), Michigan Operations for the continued operation of the hazardous waste treatment, storage, and disposal units at its facility located at 1000 East Main Street in Midland, Michigan and to approve a major operating license modification for Dow's separately licensed Salzburg Road Landfill located at 2314 West Salzburg Road in Midland, Michigan. The United States Environmental Protection Agency (U.S. EPA) is not proposing to issue a federal permit to the company authorizing continued operation because there are no federal hazardous waste program provisions that the MDEQ is not authorized for at this time. The facility operating license is based on the information contained in operating license applications submitted on March 31, 1993 and March 31, 1994 and substantial revisions to the applications submitted in response to the MDEQ's technical reviews. The public notice for this licensing action was published in the Midland Daily News on October 7, 2002. A similar notice appeared in the DEQ Calendar, a bi-weekly publication produced and distributed by the MDEQ and available at the following web site: http://www.michigan.gov/deq/0,1607,7-135-3308_3325---,00.html. These notices indicated that the MDEQ intended to enter into a corrective action consent order with Dow. The MDEQ has since decided to incorporate the off-site corrective action requirements into the draft operating license. However, Mr. Jim Sygo, Chief of the MDEQ, Remediation and Response Division, remains the information contact person for the off-site corrective action requirements.

The provisions of R 299.9518 of the Michigan Administrative Code (MAC) require the MDEQ to issue an operating license to a hazardous waste treatment, storage, or disposal facility unless: the facility has not been constructed in accordance with approved plans, applicable rules, or the conditions of the approved construction permit; the construction or operation of the facility presents a hazard to public health or the environment; or the applicant has not submitted sufficiently detailed or accurate information to enable the Director to make a reasonable judgment as to whether the operating license should be issued.

Based on the review of the Dow operating license application that was submitted to the MDEQ and numerous site inspections and audits, the MDEQ staff have proposed the operating license be issued based on the following conclusions:

1. The facility has generally been constructed and operated in accordance with approved plans, and applicable rules, except as described below. Environmental monitoring of the groundwater, ambient air, and surface water conducted by Dow and audited by the MDEQ, and compliance inspections conducted by the MDEQ staff, do not at this time show for these media that any unpermitted releases are occurring or that the facility presents a hazard to human health or the environment off-site.
2. It is unknown at this time whether historical releases from the facility present a hazard to human health or the environment. The proposed operating license contains a compliance program to determine if a human health hazard exists, and if so, requires implementation of measures to address any hazards found to be present.
3. The application submitted by Dow is sufficiently detailed to demonstrate that the facility's design and operation complies with the applicable technical standards. In addition to the standard and general facility operating conditions contained in all operating licenses, the draft operating license contains conditions specific to Dow's treatment, storage, and disposal activities. A summary of these conditions is included in Section II.C. of this Fact Sheet. The portions of the license application that describe in detail how the company will comply with certain regulations have been attached to the draft license as enforceable documents (e.g., the Waste Analysis Plan, Inspection Schedule, Personnel Training Program, Contingency Plan, and Closure and Post-Closure Plans).

Dow has attempted to comply with Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451) [formerly referred to as the Hazardous Waste Management Act, 1979 PA 64, as amended (Act 64)], during its operating life (see the Compliance Chronology, Attachment 1 to this Fact Sheet). Dow has generally been responsive in correcting violations that

have been cited. The company has made substantial improvements in the facility and operating procedures since:

1. An operating license and federal permit were issued for the container storage area, tank storage/treatment areas, and surface impoundment in 1988;
2. An operating license and federal permit were issued for the Incineration Complex in 1989;
3. A post-closure operating license was issued for several closed surface impoundments in 1992;
4. Significant operating license modifications were issued in 1991 and 1993 and other minor modifications were issued subsequent to those.

Work conducted in response to Notices of Violation and Consent Orders issued by the MDEQ has resulted in:

- The increased monitoring of the Revetment Groundwater Interceptor System (RGIS) that collects contaminated groundwater along the Tittabawassee River, including chemical characterization, and installation of the Tertiary Pond RGIS, under the September 27, 1991 Waste Management Division (WMD) Order No. 64-05-245-05-91;
- The upgrade and significantly enhanced monitoring of the RGIS, as well as implementation of a corrective action interim measure to address contamination in the surface water emergency outfall area in the Tittabawassee River, under the February 11, 1997 WMD Order No. 111-01-97;
- The removal of accumulated solids from the Tertiary Pond under the July 21, 1997 Surface Water Quality Division (SWQD) Administrative Consent Order, ACO-SW97-006, and the SWQD April 25, 2000 Amended Administrative Consent Order, AFO-SW2000-01;
- Improvements to procedures for operation of the incinerators under the December 20, 1993 WMD Order No. 64-05-93;
- Improvements to procedures for prevention of releases of wastewater treatment plant (WWTP) solids, including Tertiary Pond solids and other waste management processes at the facility, and resolution of air permit violations, under the November 19, 1998 WMD Order No. 111-11-98 and the joint April 11, 2002 WMD Order No. 111-31-02 and Air Quality Division (AQD) Order No.13-2002; and
- The following Supplemental Environmental Projects being conducted under the joint April 11, 2002 WMD Order No. 111-31-02 and AQD Order No.13-2002: installation of a groundwater collection tile along part of the east perimeter of the facility, removal of two large brine storage tanks and restoration of the tank area to recreational use.

The MDEQ is proposing to issue an operating license to Dow that incorporates the provisions of the three operating licenses referenced above and certain provisions of the operating license modifications and Consent Orders into a single operating license. One major change related to relicensing of the incinerators is that Dow's two existing incinerators, designated as the 703 and 830 Incinerators, are being closed and replaced with one incinerator with 90 percent of the combined design capacity of the two incinerators. This replacement incinerator, designated as the 32 Incinerator, is designed to meet the hazardous waste combustor maximum achievable control technology (MACT) standards that have taken effect since 1989. A notable change in the regulatory scheme under the MACT is that the hazardous waste operating license will no longer contain the extensive incinerator operating requirements and emission standards that were included in the 1989 operating license and 1993 operating license modification. The renewal hazardous waste operating license will cover the interim operation of the existing 703 and 830 Incinerators until they are closed, along with the incineration-related container and tank storage areas, the design capacity, the Waste Analysis Plan, Personnel Training Program, Contingency Plan, and Closure Plan for the 32 Incinerator.

While the above-listed items will be covered by the operating license, the operation of the 32 Incinerator unit will primarily be regulated under the air permit (Supplement to Air Permit No. 212-00A) issued on September 6, 2001 by the MDEQ AQD pursuant to Part 55, Air Pollution Control, of Act 451. In May 2002, Dow agreed to reopen and revise the air permit to include the more stringent new source MACT emission limitations and other technical changes and error corrections. The 32 Incinerator is expected to be able to meet the new source MACT limitations without making design changes. The revised air permit is under development at this time and may be approved prior to the public hearing that will be held regarding the draft operating license on November 7, 2002. Mr. Paul Schleusener is the AQD contact person for additional information about this issue. His phone number is listed at the end of this Fact Sheet.

Although the MDEQ believes it has done a thorough job of reviewing the company's application for the operating license, the agency is seeking public input on the issuance of this operating license. Section IV of this Fact Sheet describes the major modification proposed to the Salzburg Road Landfill operating license. Section V of this Fact Sheet describes the public participation process.

I. INTRODUCTION

This section of the Fact Sheet describes the state and federal programs established to regulate hazardous waste and to permit hazardous waste treatment, storage, and disposal facilities. Part 111 of Act 451 was passed by the Michigan Legislature to regulate the management of hazardous waste from generation to disposal. Likewise, Subtitle C of the Solid Waste Disposal Act, as amended, 42 USC 6901, et. seq. [commonly known as the Resource Conservation and Recovery Act of 1976 (RCRA)], was passed by the United States Congress to regulate hazardous waste nationwide. The RCRA was amended substantially by the Hazardous and Solid Waste Amendments of 1984 (HSWA).

Both RCRA and Part 111 of Act 451 established a permit system governing the treatment, storage, and disposal of hazardous wastes. The RCRA allows the states to obtain authorization to issue a state hazardous waste permit in lieu of a federal permit. Effective December 27, 1985, the State of Michigan amended its Part 111 of Act 451 Administrative Rules to be equivalent to those under RCRA and applied to the U.S. EPA for authorization. On October 30, 1986, Michigan was granted authorization to administer all portions of the RCRA program except those under HSWA. Subsequently, Michigan received authorization for many of the HSWA provisions. On April 8, 1996, Michigan received authorization for the corrective action program.

The duration of the operating license will be ten years. Because the operating license regulates the Tertiary Pond, a surface impoundment which is considered to be a "land disposal facility," it contains a provision that allows the MDEQ to review the operating license after five years to determine if any modifications are necessary.

II. DESCRIPTION OF THE FACILITY

A. Site Description and Prior Licensing

Dow operates hazardous waste treatment, storage, and disposal facilities at 1000 East Main Street in Midland, Michigan. The Michigan Operations Midland Plant Site is an industrial manufacturing and research site comprising approximately 1,900 acres, part of which is used for hazardous waste management. The company stores a wide variety of hazardous wastes and compatible non-hazardous wastes generated from the manufacturing of plastics, agricultural chemicals, organic chemicals, inorganic chemicals, and the associated research and development activities for the manufacture of these products.

Wastes are stored in containers and tanks prior to incineration on-site or transportation off-site for treatment or disposal. The container storage areas, tank storage/treatment areas, surface impoundments, and incinerators described in the next section are located on a portion of the Midland Plant Site where wastes were historically disposed prior to the enactment of the hazardous waste program. Hazardous wastes are also treated on-site at Dow's WWTP. Since the WWTP has a

National Pollutant Discharge Elimination System permit, the treatment conducted in tanks is subject to the wastewater treatment unit exemption pursuant to R 299.9503(1)(f) and, therefore, is not required to be licensed. However, the final (tertiary) treatment that is conducted in the series of surface impoundments, collectively known as the Tertiary Pond, is subject to regulation under the hazardous waste program. The locations of the hazardous waste management units described below are shown on the facility map, Attachment 2 to this Fact Sheet.

Currently, the container and tank storage areas and the Tertiary Pond are operated under a hazardous waste facility operating license that was issued on September 30, 1988. The 703 and 830 Incinerators are operated under a hazardous waste facility operating license that was issued on September 29, 1989. The closed surface impoundments conduct maintenance and monitoring under a hazardous waste facility post-closure operating license that was issued on March 31, 1992. Those operating licenses expired on September 30, 1993, September 29, 1994, and September 30, 1993, respectively. However, the company submitted timely reapplications and has, therefore, been allowed to continue operating these units under the conditions of the operating licenses referenced above until the new operating license is issued. This extension is allowed by 1969 PA 306, as amended, under the Michigan Administrative Procedures Act.

B. Facility Design and Construction Related Facility-Specific Conditions

Dow operates hazardous waste treatment, storage, and disposal units for wastes generated at the Midland facility and at other Dow and Dow subsidiary facilities. Hazardous wastes managed at the facility include:

- a. Incinerator ash
- b. WWTP solids
- c. Contaminated soils
- d. Waste solvents
- e. Characteristic and listed wastes
- f. Off-specification products
- g. Small quantities of chemicals (lab packs)

Part III - Container Storage Conditions. The operating license allows the storage of a total volume of 443,685 gallons of hazardous waste in containers at Waste Storage Area I. This container storage area consists of a concrete slab with dikes and includes a roofed container storage building 4,200 square feet in size. The 443,685-gallon volume equates to a maximum of 8,067 55-gallon containers, 14,790 30-gallon containers, or the equivalent in containers of varying sizes. Tanker trucks may be staged at Waste Storage Area I prior to direct burning at the incinerator or unloading into the incinerator tank farm. Lab packs (drums containing small bottles of hazardous waste packed in absorbent material) are also stored. Containers of hazardous waste may be stacked at the facility provided certain conditions in the operating license are met. Wastes are typically placed on pallets and banded prior to stacking. 55-gallon containers may be stacked no greater than two high. 30-gallon containers may be stacked no greater than three high. The operating license contains special requirements for the management of ignitable and reactive wastes. Incompatible wastes are required to be segregated to prevent them from coming into contact in the event of a spill or leak.

Secondary containment prevents releases to the environment in the event of a spill or leakage. Any precipitation, leaks, and spills collect within the diked concrete slab. Accumulated liquids containing greater than 1600 milligrams/liter (mg/L) Total Oxygen Demand (TOD) or 650 mg/L Total Organic Carbon (TOC) are required to be removed within 48 hours and incinerated or otherwise managed in accordance with Part 111 of Act 451 and the rules. Accumulated liquids containing less TOD or TOC than described above are required to be removed within 96 hours and discharged to Dow's WWTP or otherwise managed in accordance with Part 111 of Act 451 and the rules.

Part IV - Tank System Storage and Treatment Conditions. The operating license allows the storage and treatment of hazardous waste in tanks as shown in the tables below.

Tank System	Storage Design Capacity	Treatment Design Capacity
Waste Storage Area IIA	1,740 cubic yards or 351,000 gallons	Not Applicable
Waste Storage Area IIB	500,000 gallons East Tank 500,000 gallons West Tank	Not Applicable
1163 Building	1,800 cubic yards or 360,000 gallons	1,950 cubic yards/day or 400,000 gallons/day
29 Building	600 cubic yards or 121,200 gallons	Not Applicable
33 Building	900 cubic yards or 181,800 gallons	1,950 cubic yards/day or 400,000 gallons/day
TOTAL	2,014,000 gallons	3,900 cubic yards/day or 800,000 gallons/day

Note: Conversion Factor Used in Table: 202 gallons/cubic yard

Tank System	Physical Form of Waste	Hazardous Waste Types
Waste Storage Area IIA	Bulk Solids	Soils and other bulk solids contaminated with hazardous wastes listed in the WSA II column of Attachment 5 (to this Fact Sheet)
Waste Storage Area IIB	Pumpable Liquids	Hazardous wastes listed in the WSA II column of Attachment 5
1163 and 29 Buildings	Bulk Solids	Soils, incinerator ash, pressed WWTP solids and other bulk solids contaminated with hazardous wastes listed in the 1163 BLDG. column of Attachment 5
	Containerized Waste	Containerized hazardous waste listed in the INCIN STORAGE column of Attachment 5 containing no free liquids
33 Building	Bulk Solids	Incinerator ash resulting from burning the hazardous wastes listed in the INCIN STORAGE column of Attachment 5 and pressed WWTP solids contaminated with hazardous wastes listed in the 1163 BLDG. column of Attachment 5

The steel tanks in Waste Storage Area IIA were demolished in 1988-1989. Dow was granted approval by the MDEQ in 1994 to modify the remaining secondary containment system concrete diking/tank foundation into a tank system capable of temporarily storing contaminated soils generated during construction to upgrade the RGIS. The contaminated soils are placed into and removed from the tank system using dump trucks and front-end loaders. While contaminated soils are in storage, prior to incineration, they are kept covered by a tarp. The RGIS upgrade project is expected to be completed during 2003. Under the proposed operating license, Dow will be required to close Waste Storage Area IIA in accordance with an approved plan after the RGIS construction has been completed. Construction of a storage unit(s) to replace the Waste Storage Area IIA tank system may be approved by the MDEQ if construction is completed before the operating license expires.

Waste Storage Area IIB is a conventional tank system consisting of two 500,000-gallon steel tanks within a concrete diked secondary containment system. Between 1988 and 1995, these tanks stored dioxin-contaminated wastes from historical herbicide manufacturing operations. In 1995, these wastes were sent off-site for treatment. These tanks are not currently in use. However, secondary containment is present to prevent releases to the environment from a spill or leakage in the event that Dow resumes use of the tanks. In order to return these tanks to use, updated certifications that demonstrate that the tanks and secondary containment are capable of storing the types of wastes Dow wishes to store must be submitted to the MDEQ for review and approval. Waste Storage Areas IIA and IIB are not roofed. Any precipitation, leaks, and spills collect within the diked concrete slab.

The 1163, 29, and 33 Building tank systems are designed to store bulk solids rather than liquid wastes, with the wastes being placed and removed using dump trucks and front-end loaders. Of these three tanks, only the 1163 Building tank system is currently a licensed greater-than-90-day storage tank. Treatment consists of dewatering and delumping bulk waste prior to further treatment or disposal. The status of the 29 and 33 Building tank systems are described below.

Dow is currently operating the 29 Building tank system pursuant to the R 299.9503(1)(f) wastewater treatment unit exemption to manage dewatered Tertiary Pond solids in accordance with the "Petition for Site-Specific Treatability Variance from Land Disposal Restrictions (LDR) Treatment Standards for Hazardous Wastes, Title 40 Code of Federal Regulations (40 C.F.R.) §268.44(h)" Notification of Approval signed by the U.S. EPA and MDEQ on June 18, 2002. After the Tertiary Pond solids project has been completed, Dow has requested that they be allowed to transfer 600 cubic yards of the unused storage capacity from the 1163 Building and convert the 29 Building tank system from a wastewater treatment unit to a licensed storage tank.

The 33 Building tank system is currently under construction as part of the 32 Incinerator complex. Following issuance of this operating license, after the submittal and approval of an acceptable tank system certification and an acceptable demonstration that Dow has obtained an air use approval or permit and any other necessary environmental permits or approvals, Dow has requested that they be allowed to transfer 900 cubic yards and 1950 cubic yards/day of the unused storage and treatment capacity, respectively, from the 1163 Building to the 33 Building tank system.

The 1163, 29, and 33 Building tank systems are all designed in a manner that does not accumulate precipitation or run-on within the tank systems. These tank systems are roofed and constructed with concrete floors and dikes to provide secondary containment. The sloped floors include trenches that gravity drain leachate from the dewatering treatment process and/or truck wash water to Dow's WWTP. Accumulated liquids from all of these tank systems are or will be managed in essentially the same manner as that described for Waste Storage Area I. The operating license contains conditions for the operation, maintenance, and assessment of the tank systems referenced above and special requirements for the management of ignitable, reactive, and incompatible wastes.

In addition to the changes described above, Dow has requested the flexibility to be able to store containerized waste inside the 1163 and 29 Building tank systems following licensure.

The following table summarizes all of the storage capacity transfers to other tank systems and container storage requested by Dow under the operating license and shows the remaining 1163 Building tank system storage capacity. The operating license includes a provision that allows Dow to construct a storage unit(s) to utilize the remaining unused 1163 Building storage capacity without a construction permit provided that construction commences within three years of operating license issuance and is completed before the operating license expires and is done in accordance with a minor modification requiring the written approval of the MDEQ.

1,100,000 gallons	Original 1163 Building Tank System Licensed Storage Capacity (1988)
- 360,000 gallons	Current 1163 Building Tank System
- 121,200 gallons	29 Building Tank System
- 181,800 gallons	33 Building Tank System
- 133,250 gallons	32 Building Pack Room
- 8,250 gallons	Incinerator Tank Systems
295,500 gallons	Remaining 1163 Building Tank System Storage Capacity

Part V - Incinerator Container Storage Conditions. The operating license allows the storage of hazardous waste prior to incineration in several types of containers as shown in the table below. The 830 Building and 32 Building container storage areas are roofed. The unloading spots are not. All of these container storage areas are constructed with concrete floors and dikes to provide secondary containment and they are generally managed in a manner similar to that described above for Waste Storage Area I. The dempsters, dinos, and tanker truck trailers referenced below are portable larger size containers. Some are unloaded into the incinerator storage tanks shown in the table in the next part of this Fact Sheet and others are used for the direct burning of waste in the incinerator.

Container Storage Area	Container Types	Storage Design Capacity
830 Building Container Storage Area	Packs of Varying Sizes; Typically 30-Gallon Packs	125,000 gallons, of which no more than 100,000 gallons may be liquid waste
32 Building Container Storage Area	Packs of Varying Sizes; Typically 30-Gallon Packs	133,250 gallons
Unloading Spot LS-1202	Dempster	750 gallons
Unloading Spot LS-2010	Dempster	750 gallons
Unloading Spot LS-2020	Dempster	750 gallons
Unloading Spot LS-1203	Dino	2,500 gallons
Unloading Spot LS-2030	Dino	2,500 gallons
Unloading Spot LS-2040	Dino	2,500 gallons
Unloading Spot LS-101	Trailer	7,000 gallons
Unloading Spot LS-1213	Trailer	7,000 gallons
Unloading Spot LS-1214	Trailer	7,000 gallons
Unloading Spot LS-2050	Trailer	7,000 gallons
Unloading Spot LS-2060	Trailer	7,000 gallons
Unloading Spot LS-2070	Trailer	7,000 gallons
Unloading Spot LS-2080	Trailer	7,000 gallons
Unloading Spot LS-2090	Trailer	7,000 gallons
Unloading Spot LS-2100	Trailer	7,000 gallons
Unloading Spot LS-1215	Rail Car	20,000 gallons
Unloading Spot LS-1216	Rail Car	20,000 gallons
TOTAL		371,000 gallons

Part VI - Incinerator Tank System Storage Conditions. The incinerator “tank farm” is currently located between the 703 and 830 Incinerators. Its location will not change as a result of the replacement of these incinerators with the 32 Incinerator. Seven of these above-ground, vertical steel tanks are used to store organic liquid wastes prior to incineration; one is used to store water waste; and two are used to collect drainage from unloading spots. The tanks are located in a secondary containment area that is constructed with concrete floors and dikes to contain leaks, spills, and accumulated precipitation. Accumulated liquids are managed in essentially the same manner as that described for the other container and tank storage areas at the facility. This part of the operating license also contains conditions for the operation, maintenance, and assessment of the tank systems referenced below and special requirements for the management of ignitable, reactive, and incompatible wastes.

Tank System	Storage Design Capacity
V-101	10,150 gallons
V-301	18,700 gallons
V-302	18,700 gallons
V-303	18,700 gallons
V-401	18,700 gallons
V-402	15,900 gallons
V-403	18,700 gallons
V-404	18,700 gallons
V-601	7,000 gallons
V-701	7,000 gallons
TOTAL	152,250 gallons

Part VII - Incinerator Treatment Conditions. Page 4 of this Fact Sheet provides an overview of the changes in the regulatory status for the incinerators at the facility since the Hazardous Waste Combustor MACT shifted the bulk of the hazardous waste incinerator regulatory requirements from the hazardous waste program to the air program. The operating license includes the conditions necessary to allow the operation of the 703 and 830 Incinerators to treat hazardous waste that is generated during the transition period until the shakedown of the 32 Incinerator has been completed. The design capacities for the incinerators are shown below.

Incinerator	Maximum heat output for the unit, including hazardous waste and auxiliary fuels
32	130 MMBTU/hr
703	85 MMBTU/hr
830	60 MMBTU/hr

An updated closure plan for the 703 and 830 Incinerators is required to be submitted to the MDEQ for review and approval concurrent with the submittal of the 32 Incinerator certification. Refer to the operating license for the complete set of applicable requirements (e.g., Documentation of Compliance, Continuous Monitoring System Performance Evaluation Plan, Comprehensive Performance Testing (CPT), Notification of Compliance after the CPT) and to the Compliance Schedule for the 32 Incinerator, included in Attachment 3 to this Fact Sheet, for a comprehensive list of the MACT compliance activities and due dates. The Fact Sheet dated July 31, 2001, that was developed by the MDEQ, AQD, for public participation on Permit Application 212-00A is included in Attachment 3 to this Fact Sheet for informational purposes. Condition VII.A.6. of the draft operating license provides that the Director may require a site specific risk assessment (SSRA) of the 32 Incinerator if the Director determines that the results of the CPT or other relevant information indicates that the 32 Incinerator is a potential threat to human health and the environment. Under the "omnibus authority" provided under R 299.9521(3)(b) of Michigan's hazardous waste program, additional conditions may be imposed for the 32 Incinerator if the SSRA shows that the MACT standards are not sufficient to protect human health and the environment. The U.S. EPA "Hazardous Waste Combustion (HWC) National Emission Standards for Hazardous Air Pollutants (NESHAP) Final Rule Fact Sheet: Resource Conservation and Recovery Act Site-Specific Risk Assessment Policy for Hazardous Waste Combustion Facilities," July 2000 is included in Attachment 3 to this Fact Sheet for informational purposes. The MDEQ, Waste and Hazardous Materials Division staff who have incinerator licensing and compliance responsibilities will continue working with the AQD staff during the transition period and will assist with CPT oversight and other transitional activities, as needed.

Part VIII - Surface Impoundments Storage and Treatment Conditions. The operating license includes conditions necessary for the final treatment of secondary effluent from Dow's WWTP in a hazardous waste surface impoundment prior to sand filtration and discharge to the Tittabawassee River. The Tertiary Pond consists of three ponds in series that provide temperature equalization, storage, aeration,

biological treatment, flow stabilization, and surge capacity. The design capacities for the individual ponds are shown in the table below.

Tertiary Pond Surface Impoundments	Surface Area	Capacity
Pentagonal	7.5 acres	33,000,000 gallons
Rectangular	13 acres	50,000,000 gallons
Main	182 acres	700,000,000 gallons
TOTAL	202.5 acres	753,000,000 gallons

The Tertiary Pond is authorized to treat no more than a total volume of 50,000,000 gallons per day in accordance with the waiver under RCRA from meeting the minimum technology requirements for surface impoundments in 40 CFR 264 Subpart K. The U.S. EPA approved the waiver in the Determination Regarding Minimum Technology Requirements Pursuant to Section 3005(j)(3), dated October 6, 1987. In 1991, Dow was required to install a Tertiary Pond RGIS to ensure that hazardous constituents do not vent to surface water. This replaced the requirement to comply with the alternate concentration limits for groundwater listed in the Determination referenced above. This remainder of the waiver continues in effect. Updated requirements for the operation and monitoring of the Tertiary Pond RGIS are included in Part X, Environmental Monitoring, of the operating license.

Part IX - Post-Closure Care Conditions for Closed Units. Conditions for the post-closure care (e.g., environmental monitoring, inspections, maintenance, site security, post-closure use of the property) are included in this part of the operating license for the following closed hazardous waste surface impoundments:

Closed Unit	Closed Unit Process Design Capacities and General Description of Wastes Managed
Diversion Basin Certified Closed March 8, 1989	37,000,000 gallons Diverted untreated waste water and manufacturing complex surface run-off
Open Wastewater Conduits Certified Closed December 27, 1988	
Conduit A	50,000 gallons General influent wastewater
Conduit B	310,000 gallons Phenolic treatment system influent wastewater
Conduit C-1	1,000,000 gallons General influent wastewater
Conduit C-2	90,000 gallons Diverted primary wastewater
Conduit C-3	50,000 gallons Secondary treated wastewater
Sludge Dewatering Facility Certified Closed January 29, 1990	136,000,000 gallons Wastewater Treatment Plant Solids; tanker truck flushings; and sludges from the closure of the Diversion Basin and Open Wastewater Conduits

Wastes and visibly contaminated soils were removed from the Diversion Basin and Open Wastewater Conduits, but they were not clean closed. The Sludge Dewatering Facility was closed with waste in place. The Diversion Basin was replaced with Diversion Tanks that are part of Dow's WWTP which are subject to the wastewater treatment unit exemption pursuant to R 299.9503(1)(f) and, therefore, not required to be licensed. The Open Wastewater Conduits were replaced with piping, which is also

exempt from licensing. In addition, the dewatering of WWTP solids is now being done in exempt wastewater treatment units instead of a surface impoundment.

C. Other Facility-Specific Operating License Conditions

Facility-specific conditions are included in the following parts of the operating license:

Part X – Environmental Monitoring Conditions. The environmental monitoring programs required under the operating license are summarized in Section III, Environmental Impact, below.

Part XI – Corrective Action Conditions. This part of the operating license identifies the waste management units (WMUs) and areas of concern (AOCs) at the facility and requires Dow to continue implementing on-site corrective measures in a phased manner. Refer to Part XI of the operating license for the tables listing the WMUs and AOCs and the corrective action requirements. The Compliance Schedule in Attachment 4 to this Fact Sheet contains a list and prioritized schedule for the corrective action work required to be conducted under the operating license. The operating license includes the proposed corrective action process to address off-site releases.

Part XII – Schedules of Compliance. This part of the operating license requires Dow to comply with:

- The prioritized compliance schedule for environmental monitoring and corrective action contained in Attachment 28 of the operating license. This compliance schedule is attached to this Fact Sheet as Attachment 4. The MDEQ may require additional corrective action based upon the results of the compliance schedule work, other relevant information, or changed conditions which lead the MDEQ to determine that there is, or may have been, a release of a contaminant(s) from WMU(s) or AOC(s).
- The schedule of due dates to conduct activities necessary to comply with the hazardous waste combustor MACT standards are contained in Attachment 29 of the operating license. This compliance schedule is included in Attachment 3 to this Fact Sheet.

III. ENVIRONMENTAL IMPACT

A. Wastes Stored, Treated, and Disposed

The hazardous wastes that can be stored, treated, and disposed by Dow are included in Attachment 8, List of Acceptable Waste Types for Management at the Michigan Operations, Midland Plant Site, and Attachment 21, List of Waste Types Managed in Closed Units, of the operating license. These are attached to this Fact Sheet as Attachment 5. Dow manages an extensive universe of hazardous wastes generated on-site and at off-site Dow facilities and subsidiaries. In addition, Dow manages compatible non-hazardous wastes and wastes from local household hazardous waste collection days. On-site incineration is the primary means used by Dow to reduce the volume and toxicity of hazardous and non-hazardous wastes that it generates. Refer to the Contingency Plan for the facility, Attachment 4 of the operating license, for a description of the procedures that must be followed in the event that fires, explosions, or releases of hazardous waste or hazardous waste constituents to air, soil, or surface water occur which could threaten human health or the environment.

B. Groundwater Monitoring

Dow conducts groundwater monitoring to evaluate whether hazardous constituents from the regulated units (container storage areas, tank storage and treatment areas, incinerators, and existing and closed surface impoundments) have entered the groundwater below the waste management areas. The draft operating license includes multiple groundwater monitoring programs to detect contamination and to effectively evaluate the groundwater remediation at the site. Groundwater monitoring is being

significantly expanded beyond the programs conducted under the 1988 operating license and federal permit.

Monitoring Program	Type of Program	Monitoring Frequency
Glacial Till and Regional Aquifer Groundwater	Detection/Chemical	Quarterly
Sludge Dewatering Facility Groundwater	Detection/Chemical	Leak Detection Wells Quarterly
	Detection/Chemical	Other Monitoring Wells Annually
	Detection/Hydraulic	Quarterly
Poseyville Landfill Groundwater	Detection/Chemical	Quarterly
	Corrective Action/Hydraulic	Quarterly
	Corrective Action/Chemical	Quarterly
Six Purge Wells Groundwater	Corrective Action/Chemical Characterization	Within 60 days After Operating License Issuance
	Corrective Action/Hydraulic	Quarterly
Sand Bar Groundwater	Corrective Action/Chemical	Annually
	Corrective Action/Hydraulic	Real-Time (Averaged on a 12 Hour Basis)
		Bi-Monthly Manual Confirmation
Tertiary Pond Groundwater	Compliance/Chemical	Quarterly (for one year after ceasing Purge Well 4290 operation); if remediation is not complete, continue Quarterly until four consecutive samples show remediation is complete
	Detection/Chemical	Semi-Annual After Remediation is Complete
	Detection/Hydraulic Slurry Wall Integrity	Monthly
East-Side Main Plant RGIS Groundwater	Hydraulic	Real-Time (each primary piezometer averaged on a 12 hour basis)
		Bi-Monthly Manual Confirmation and River Level Comparison
East-Side Main Plant RGIS Groundwater	Chemical - Lift Stations	Annually
West-Side Main Plant and Tertiary Pond RGIS Groundwater	Hydraulic	Monthly Manual Reading and Water Level Comparison
	Chemical – Lift Station 20	Annually
Facility Shallow Groundwater	Hydraulic	Quarterly and Annual
	Chemical (Detection, Compliance or Corrective Action, As Appropriate)	If Hydraulic Monitoring Shows Existence or Potential for Off-Site Groundwater Flow

C. Ambient Air Monitoring Program

Dow has conducted ambient air monitoring since 1992 to track air emissions at the facility. Selected volatile organic compounds and metals will continue to be monitored every 12 days as described in Attachment 26 of the operating license.

D. Soil Monitoring Programs

Under the operating license, Dow will be required to expand the semi-annual soil box monitoring program that was implemented in 2002 as part of the Tertiary Pond solids removal project pursuant to an agreement with the Public Interest Research Group in Michigan and a program approved by the MDEQ and U.S. EPA. This monitoring is described in Attachment 24 of the operating license. Soil boxes are currently located at the 23 Gate, which is near the railroad track on South Saginaw Road, and at Dow's Salzburg Road Landfill. Additional soil boxes will be added at major exit points from the facility: at the 2 Gate, near the 47 Building on East Main Street, and at the 11 Gate, on Bay City Road. Dow will also be required to establish a soil monitoring program in the Green Belt Areas located on Dow property north and east of the facility fence line along Bay and Saginaw Roads downwind of the facility in areas where clean top soil was placed during Phase I of the Soil and Groundwater Exposure Control Program. The purpose of these programs is to verify that the Soil and Groundwater Exposure Control Program, Attachment 27 of the operating license, is effectively preventing the track out of dioxins and furans from the facility and preventing the migration of dioxins and furans from facility surficial soils via blowing dust.

E. Surface Water Monitoring

Dow currently conducts a surface water monitoring program to evaluate whether hazardous constituents have entered the surface water in Bullock Creek and the Tittabawassee River. The surface water monitoring program will be updated under the Compliance Schedule referenced in Part XII of the operating license. Sand Bar groundwater is also required to be evaluated as part of the Surface Water Monitoring Program that is required to be developed under the Compliance Schedule.

F. Leachate Monitoring

Dow conducts leachate monitoring for the Sludge Dewatering Facility, a surface impoundment that was closed with waste in place. Monthly leachate volumes are reported annually. Hydraulic monitoring is conducted on a quarterly basis. Chemical monitoring is conducted every four years. The leachate is sampled and analyzed for the parameters listed in Attachment 24 of the operating license.

Corrective action leachate monitoring at the Poseyville Landfill will be conducted after the current environmental monitoring program has been revised in accordance with the Compliance Schedule, Attachment 28 of the operating license.

IV. MAJOR OPERATING LICENSE MODIFICATION

The MDEQ also proposes to approve a major operating license modification for Dow's Salzburg Road Landfill located at 2314 West Salzburg Road in Midland, Michigan concurrent with the issuance of the Michigan Operations facility renewal operating license. The request for the operating license major modification for Dow's Salzburg Road Landfill was made on July 15, 2002, and was subsequently revised. The modification is necessary to ensure that the hazardous waste codes applicable to the incinerator ash, treatment residuals, and other wastes that are disposed at the landfill, remain consistent with the waste types proposed for management under the draft facility operating license.

The operating license for Dow's Salzburg Road Landfill issued on January 12, 1987. This operating license expired on January 12, 1992; however, the company submitted a timely reapplication and has,

therefore, been allowed to continue operating the landfill under the conditions of the existing license until a renewal license is issued. This extension is allowed by 1969 PA 306, as amended, under the Michigan Administrative Procedures Act. It is anticipated that the application review for the landfill will be resumed by the MDEQ after a final decision is made on the facility operating license described in this Fact Sheet.

Condition III.C. of the January 12, 1987 operating license provides for the construction and maintenance of new cells in accordance with the site development plan. Consequently, the MDEQ has continued to allow such construction. The new landfill cells that have been approved by the MDEQ are required to be designed, constructed, operated, and maintained in accordance with the current regulatory requirements for landfills. The most recently constructed hazardous waste landfill cell, designated as Cells 20-22, was constructed in 2000 and approved for use in 2001. This cell will also be used for the disposal of compatible non-hazardous wastes.

In 1984, Congress created the U.S. EPA's Land Disposal Restrictions (LDR) program. The LDR program ensures that toxic constituents present in hazardous wastes are properly treated before they are land disposed. Since then, mandatory technology-based treatment standards have been developed that must be met before hazardous waste is placed in a landfill. These standards were devised to minimize short and long-term threats to human health and the environment. New hazardous waste codes, and subsequently, new LDR standards are periodically added to the federal and state hazardous waste regulations.

Most of the hazardous waste codes that Dow requested to manage in the Salzburg Road Landfill are codes that are handled at the Michigan Operations facility and treated by incineration. Due to the mixture and derived-from rule, the incinerator ash carries these codes, so Salzburg Road Landfill must be licensed to receive these codes. These new hazardous wastes may only be disposed at the Salzburg Road Landfill if they meet the applicable LDR treatment standards listed in 40 CFR Part 268. The amendment would delete the list of hazardous waste codes that is currently attached to the Salzburg Road Landfill operating license and replace it with an updated list that includes waste codes that have been added to Part 2, Identification and Listing of Hazardous Waste, in the Part 111 of Act 451 rules since the facility operating license was issued. Hazardous waste codes that were inadvertently not included in the original list of acceptable waste types for disposal in the landfill have been requested to be added at this time as well. This list is included in Attachment 6 to this Fact Sheet.

V. PUBLIC PARTICIPATION

A. Public Comment Procedures

The purpose of public participation is to ensure that the interested public has knowledge of the MDEQ proposed actions, and that it has the opportunity to comment on those actions. In addition, the process ensures that the MDEQ has the opportunity to benefit from any information the public might have, relevant to the proposed actions.

Comments may be submitted in writing to the addressee listed in Subsection C between October 7, 2002 and December 6, 2002, or comments may be presented at the public hearing. The public comment and public hearing procedures that will be followed are stated in MAC R 299.9514 and R 299.9515 and in 40 C.F.R. 124.11 and 124.12.

Public information meetings will be held at 7:00 p.m. on October 22, 2002 at the Midland High School Cafeteria, 1301 Eastlawn Drive, Midland, Michigan, and at 7:00 p.m. on October 29, 2002 at the H.H Dow High School Cafeteria, 3901 North Saginaw Road, Midland, Michigan.

The public hearing on the Part 111 of Act 451 operating license and major operating license modification is scheduled for 4:00 to 6:00 p.m., and will begin again at 7:00 p.m., on November 7, 2002,

at the Midland Center for the Arts Garden Room, located at 1801 West St. Andrews in Midland, Michigan.

The locations for the public information meetings and the public hearing are accessible to disabled persons. Any person requiring specialized accommodations or assistance, such as an interpreter for the deaf, meeting materials in Braille, large print, or on audio tape, should contact Ms. Julie Blanchard, at the address given in Subsection C, or at 517-373-9875 a week in advance of each meeting.

After the public hearing and the close of the public comment period, the MDEQ will decide whether to issue the final operating license and approve the major operating license application. Written comments submitted during the public comment period and statements provided at the public hearing will be considered by the Chief of the Waste and Hazardous Materials Division (WHMD) in the formulation of the final decision. Responses to written comments and statements will be included in the record supporting the final decision of the agency. The MDEQ's final decision on the operating license and major operating license modification will be communicated to the applicant, each person who submitted a written comment during the public comment period, persons providing statements at the public hearing, and all persons on the facility mailing list.

B. Locations of Available Information

The administrative record for the Part 111 of Act 451 operating license is on file at the MDEQ, WHMD Office located on the North Atrium (lower level) of Constitution Hall at 525 West Allegan in Lansing, Michigan (contact Ms. Cheryl Howe at 517-373-9881). In addition, copies of the draft operating license and major operating modification, the Fact Sheet, and the operating license application are available for review at the MDEQ, Saginaw Bay District Office located at 503 North Euclid in Bay City, Michigan (contact Ms. Trisha Peters at 989-686-8025, ext. 8204); and the Reference Desk of the Grace A. Dow Memorial Library, located at 1710 West St. Andrews in Midland, Michigan (989-837-3449).

C. Due Date for Public Comment and Information Contacts

Written comments concerning the draft operating license should include the name and address of the writer, a concise statement of the basis for the comments, and the supporting relevant facts upon which the comments are based. Written comments must be postmarked no later than December 6, 2002. Comments and requests regarding the Part 111 of Act 451 operating license and/or major operating license modification should be addressed to: Ms. Cheryl Howe, Waste and Hazardous Materials Division, Michigan Department of Environmental Quality, P.O. Box 30241, Lansing, Michigan 48909.

Information contacts are as follows:

Topics	Contact	Phone
General licensing information, containers, tanks, surface impoundments, ambient air monitoring, and air emissions	Ms. Cheryl Howe	517-373-9881
Environmental monitoring, on-site corrective action, and related compliance schedules	Mr. Allan Taylor	517-335-4799
Incineration and related storage, treatment, and compliance schedule	Mr. Daniel Dailey	517-335-6610
Toxicological information related to facility corrective action and risk assessment	Dr. Deborah MacKenzie-Taylor	517-335-4715
Incinerator air permit	Mr. Paul Schleusener	517-335-6828
Compliance history and inspections	Ms. Trisha Peters	989-686-8025, ext. 8204
Off-site corrective action	Mr. Jim Sygo	517-335-1104

ATTACHMENT 1

COMPLIANCE CHRONOLOGY

**RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)/ACT 64/PART 111 OF ACT 451
COMPLIANCE CHRONOLOGY
December 1988 through July 2002**

**The Dow Chemical Company (Dow)
MID 000 724 724**

12/14/88	Dow reported the burning of 245 milligrams of monochlorobiphenyl isomers in the 703 Incinerator. 1.2 kilograms of PCB contaminated material had mistakenly been placed in lab pack that was to be transferred for incineration.
12/28/88	A complete Act 64 inspection was conducted at the Incinerator Complex by the Michigan Department of Natural Resources (MDNR) and the following violations were cited: Container labeling violations and failure to correct deficiencies in the groundwater hydraulic monitoring equipment for the Revetment Groundwater Interceptor System (RGIS).
03/22/89	A complete Act 64 inspection was conducted at the Incinerator Complex by the MDNR and no violations were cited. Dow modified the secondary combustion chamber to allow for the 2-second retention time within the secondary combustion chamber.
04/17/89 04/18/89 04/19/89 04/20/89 04/21/89	Dow submitted and obtained approval from the MDNR for a 5 day trial burn, which was conducted during this week. MDNR staff was on site throughout the trial burn to split samples with Dow.
05/4/89	A complete Act 64 and RCRA inspection was conducted at the Incinerator Complex and no violations were cited.
05/24/89	MDNR quarterly compliance inspection; no violations cited.
06/14/89	In Compliance (IC) letter sent.
07/26/89	MDNR quarterly compliance inspection; labeling violations and a leaking valve on a hazardous waste tank were cited.
08/09/89	Letter of Warning (LOW) sent citing violations identified during 07/26/89 inspection.
08/22/89	Dow response letter to 08/9/89 LOW.
09/11/89	Closure inspection of sludge dewatering facility; no violations cited.
09/22/89	Closure inspection of sludge dewatering facility; no violations cited.
11/29/89	MDNR quarterly compliance inspection; inadequate aisle space at the incinerator staging area was cited. Conducted follow-up inspection to 07/26/89 inspection.
11/29/89 11/30/89	Operation and Maintenance (O&M) inspection.
12/14/89	LOW sent citing violation identified during 11/29/89 inspection.
12/15/89	Return to Compliance (RTC) letter sent for 07/26/89 inspection.
01/09/90	Dow response letter to 12/14/89 LOW.
03/20/90	O&M inspection completed (data review completed). Violations for failure to submit anomalous groundwater data, RGIS failure, failure to implement response actions, and failure to correct deficiencies in the groundwater sampling and analysis plan.
03/30/90	MDNR quarterly inspection; untrained staff and groundwater exceedance violations were cited.
04/05/90	LOW sent citing violations identified during 03/30/90 inspection.
04/16/90	Response letter from Dow disputing violations cited during 03/30/90 inspection.
05/11/90	LOW sent citing violations identified on 03/20/90 from 11/29/89 O&M inspection.

06/19/90 06/21/90	MDNR quarterly inspection and follow up inspection to 11/29/89 O&M and 03/30/90 inspections conducted. Unresolved violations from 04/5/90 and 05/11/90 LOWs were identified. Additional violations were cited for RGIS, failure to submit data within the required time, failure to report, failure to implement the contingency plan (RGIS failure).
07/09/90	Second LOW sent citing unresolved violations for anomalous groundwater alternate concentration limit exceedances, failure to report exceedances, failure to report groundwater data suggesting RGIS failure, failure to report corrective action taken, and failure to implement corrective actions.
07/10/90	LOW sent citing additional violations identified during the 06/19/90 and 06/21/90 inspections.
07/16/90	Response letter from Dow disputing RGIS failure.
08/10/90	Response letter from Dow explaining violations and again, disputing RGIS failure.
02/07/91 03/05/91	MDNR quarterly inspection; hazardous waste not placed in appropriate containers, hazardous waste containers stored open, unlabelled containers violations were cited.
04/03/91	LOW sent citing violations identified during the 02/7/91 and 03/5/91 inspections.
06/12/91	MDNR quarterly inspection; hazardous waste not placed in appropriate containers, hazardous waste containers stored open, unlabelled container violations were cited.
07/10/90	RGIS failure referred to Compliance and Enforcement Section for escalated enforcement.
07/22/91	LOW sent citing violations identified during the 06/12/91 inspection.
08/07/91	Response letter from Dow indicating the violation from 06/12/91 had been corrected.
08/15/91	MDNR quarterly inspection and follow up inspection to 06/12/91 inspection, no violations cited.
09/06/91	RTC letter sent for 06/12/91 inspection.
10/02/91	Consent Order executed and sent to Dow for RGIS failure, penalty assessed.
12/10/91 12/17/91	MDNR quarterly inspection; no violations cited.
01/25/92	Explosion at 703 Incinerator.
01/27/92	MDNR quarterly inspection; numerous violations cited for 703 Incinerator explosion.
02/07/92	IC letter sent for 12/10/91 inspection.
04/17/92	LOW sent citing violations identified during 1/27/92 inspection.
06/18/92 07/01/92	MDNR quarterly inspection; no violations cited.
07/29/92 09/23/92 09/29/92	MDNR quarterly inspection; violations cited for failure to place hazardous waste in containers or tanks. Container stored open, labeling violations, leaking drums.
07/30/92	Incinerator explosion violations referred for escalated enforcement to Compliance and Enforcement Section.
09/18/92	Response letter from Dow to 01/27/92 inspection disputing violations resulting from 703 Incinerator explosion.
10/14/92	LOW sent citing violations identified during 07/29/92, 09/23/92 and 09/29/92 inspections.
10/30/92	Response letter from Dow disputing violations cited and explaining others.
12/04/92	Follow up inspection to verify correction of violations from 07/29/92, 09/23/92, and 09/29/92.

12/10/92	MDNR quarterly inspection, no violations cited.
01/04/93	RTC letter sent for 07/29/92, 09/23/92, and 09/29/92 inspections.
02/04/93	Explosion at the 703 Incinerator.
02/04/93	MDNR quarterly inspection; investigation into the explosion at 703 Incinerator.
02/12/93	Letter from Dow; preliminary incident report relating to 703 Incinerator explosion.
04/14/93	Notice of Violation (NOV) issued to Dow with draft Consent Order to resolve the 703 Incinerator explosions and other hazardous waste violations.
05/14/93	Amended NOV sent to Dow with additional violations noted and increased penalties.
05/17/93	Response letter from Dow disputing violations cited in the 04/14/93 NOV.
07/21/93	MDNR quarterly inspection; no violations cited.
08/31/93	IC letter sent to Dow for 07/21/93 inspection.
09/16/93	Revised Consent Order to resolve 703 Incinerator explosions and other hazardous waste violations sent to Dow.
09/29/93	Response letter from Dow to amended Consent Order disputing violations and penalty calculations.
10/06/93	MDNR quarterly inspection; no violations cited.
12/28/93	Letter from MDNR to Dow with copy of executed Consent Order to resolve incinerator explosions, penalties assessed.
01/24/94	MDNR quarterly inspection; violations cited for leaking containers, failure to inspect, inadequate aisle space, release of hazardous wastes
01/25/94	
02/01/94	Letter from Dow requesting termination of the Consent Order for 703 Incinerator explosions and other hazardous waste violations.
02/08/94	Letter to Dow from MDNR terminating Consent Order.
02/09/94	LOW sent to Dow citing violations from 01/24/94 and 01/25/94 inspections.
03/21/94	Response letter from Dow disputing violations cited, except for failure to inspect during 1/24-25/94 inspections.
04/12/94	MDNR letter to Dow further explaining violations cited during 01/24/94 and 01/25/94 inspections.
05/13/94	Response letter from Dow indicating actions taken to correct violations cited during 01/24/94 and 01/25/94 inspections.
05/18/94	MDNR quarterly inspection; violations cited for inadequate secondary containment (no coatings) and failure to notify at generator sites.
05/19/94	
05/24/94	Letter from Dow providing rationale for not coating certain concrete containment areas.
07/12/94	MDNR O&M inspection reveals failure of RGIS system.
08/10/94	MDNR meeting with Dow regarding secondary containment issue.
08/18/94	Second LOW sent to Dow citing secondary containment violations.
09/19/94	Dow proposal to MDNR to implement an aggressive management plan for secondary containment as an equivalent device to replace coatings.
09/21/94	MDNR quarterly inspection; numerous violations cited 09/22/94 for failure of the RGIS system and failure to report.
09/22/94	
09/28/94	
09/23/94	MDNR letter to Dow approving equivalent device for secondary containment.
11/10/94	LOW sent to Dow citing violations identified in 09/21/94, 09/22/94 and 09/28/94 inspections.
11/10/94	RGIS failure referred to Enforcement Section for escalated enforcement.
01/11/95	Letter from Dow disputing violations associated with RGIS failure, but acknowledges failure to report.
12/20/94	MDNR quarterly inspection identified releases at 830 Incinerator Ash Building and 0181 Building and no waste codes on a container.

12/28/94	MDNR LOW citing violations identified during the 12/20/94 inspection.
01/24/95	Dow response to 12/28/94 LOW.
01/31/95	RTC letter sent for 12/20/94 inspection.
02/14/95	MDNR quarterly inspection identified release of hazardous waste at the 489 Building, no waste codes on a container, and one container not dated.
02/23/95	MDNR LOW citing violations identified during the 02/14/95 inspection.
04/05/95	Dow response to 02/23/95 LOW.
04/18/95	RTC letter sent for 02/14/95 inspection.
05/23/95	MDNR quarterly inspection identified inadequate secondary containment at the incinerator tank farm.
06/21/95	MDNR LOW citing violation identified during the 05/23/95 inspection. LOW commented on multiple emergency vent openings at the incinerators.
07/19/95	Dow response to 06/21/95 LOW.
09/07/95	RTC letter sent for 05/23/95 inspection.
08/31/95 09/05/95	MDNR quarterly inspection identified a RGIS release to the Tittabawassee River.
10/19/95	Michigan Department of Environmental Quality (MDEQ), formerly MDNR, LOW citing violations identified during the 08/31/95 and 09/05/95 inspections, violations included in Waste Management Division (WMD) Consent Order 111-01-97.
11/30/95	Dow response to 10/19/95 LOW.
12/04/95 12/05/95	MDEQ quarterly inspection – no violations identified. IC letter not sent due to RGIS investigation.
03/06/96 03/18/96	MDEQ quarterly inspection identified no hazardous waste numbers on containers at the Ceramics Plant and contingency plan inadequacies at numerous plants.
04/04/96	MDEQ LOW citing violations identified in the 03/06/96 and 03/18/96 inspections.
05/10/96	Dow response to 04/04/96 LOW.
06/04/96	RTC letter sent for 03/06/96 and 03/18/96 inspections.
06/10/96 06/12/96 06/18/96	MDEQ quarterly inspection – no violations identified, T-Pond RGIS investigation by WMD Technical Support Unit is continuing.
08/20/96 08/21/96	MDEQ quarterly inspection - no violations identified, ongoing RGIS investigation by Technical Support Unit.
12/17/96 12/18/96	MDEQ quarterly inspection – no violations identified. IC letter not sent due to ongoing RGIS enforcement action.
02/11/97	RGIS Consent Order, WMD Order No. 111-01-97 signed.
03/03/97 03/05/97	MDEQ quarterly inspection - identified violations for two roll-off containers stored open and not marked with waste code or the words “Hazardous Waste”.
03/31/97	MDEQ LOW citing violations identified during 03/03/97 and 03/05/97 inspections.
04/17/97	Dow response to 03/31/97 LOW.
11/06/97	RTC letter sent for 03/03/97 and 03/05/97 inspections.
06/04/97 06/05/97 06/18/97	MDEQ quarterly inspection – no violations cited, IC letter not sent due to previous inspection still out of compliance.
06/17/97	United States Environmental Protection Agency (U.S. EPA) and MDEQ burner and industrial furnace joint inspection.
08/13/97 08/19/97	MDEQ quarterly inspection identified violations for one drum at 1240 Building that was not dated, inadequate inspections and operator training at the Incinerator Complex.
08/28/97	MDEQ LOW citing violations identified during 08/13/97 and 08/19/97 inspections.
08/28/97	Dow response to MDEQ 08/28/97 LOW.
09/30/97	Additional Dow response to MDEQ 08/28/97 LOW.

09/30/97	RTC letter sent for 08/13/97 and 08/19/97 inspections.
12/10/97 12/11/97	MDEQ quarterly inspection identified one manifesting violation and failure to provide annual hazardous waste training violation.
01/12/98	MDEQ LOW citing violations identified during 12/10/97 and 12/11/97 inspections.
01/22/98	Dow response to MDEQ 01/12/98 LOW.
02/09/98	RTC letter sent for 12/10/97 and 12/11/97 inspections
03/19/98	MDEQ quarterly inspection – no violations identified.
05/12/98	U.S. EPA and MDEQ 40 CFR 264 Subparts AA, BB and CC air emissions joint inspection – no violations identified.
06/04/98	IC letter sent to Dow for 03/19/98 and 05/12/98 inspections.
09/09/98	MDEQ quarterly inspection identified violations for numerous containers not dated, one container not closed, release of hazardous waste from a container and improper training.
09/17/98	MDEQ LOW citing violations identified in the 09/09/98 inspection.
10/08/98	Dow response to 9/17/98 MDEQ LOW.
10/22/98	RTC letter sent for 9/9/98 inspection.
11/13/98	Criminal Search Warrant executed by MDEQ, Criminal Investigation Section at 23 Building for alleged T-Pond solids removal project releases.
11/19/98	23 Building - WMD Order No. 111-11-98, signed by MDEQ and Dow.
11/23/98 11/25/98 11/30/98	MDEQ Consent Order corrective action and quarterly inspection identified violations for two hazardous waste roll-offs undated and not marked with waste codes nor “Hazardous Waste”; 1163 Building tank violations; inadequate inspections and training; and Part 121 Liquid Industrial Waste.
12/17/98	MDEQ LOW citing the violations identified during the 11/23/98, 11/25/98 and 11/30/98 inspections.
01/15/99	Dow response to MDEQ 12/17/98 LOW.
05/17/99	RTC letter sent for 11/23/98, 11/25/98, and 11/30/98 inspections.
06/15/99	MDEQ inspection – containers of waste of unknown origin/not determined whether the waste was hazardous.
06/28/99	MDEQ LOW citing violations identified during 06/15/99 inspection.
07/20/99	Dow response to MDEQ 06/28/99 LOW.
09/03/99	RTC letter sent for 06/15/99 inspection.
02/07/99	MDEQ inspection – no violations identified.
02/16/00	IC letter for 12/07/99 inspection.
06/20/00 06/21/00	MDEQ inspection – hazardous waste incinerator off-loading locations have uncoated concrete.
09/11/00	MDEQ LOW citing violations identified during 06/20/00 and 06/21/00 inspections.
09/26/00	Dow response to 09/11/00 MDEQ LOW.
12/13/00	MDEQ inspection – no violations identified.
01/29/01	IC letter sent for 12/13/00 inspection.
06/27/01	MDEQ inspection – no violations identified.
12/17/01	MDEQ inspection – no violations identified.
01/29/02	IC letter sent for 12/17/01 inspection.
06/26/02	MDEQ inspection – no violations identified.
07/09/02	IC letter sent for 06/26/02 inspection.

ATTACHMENT 2

FACILITY MAP



CLOSED WASTEWATER CONDUITS

LATITUDE = 43°-36'-11"
LONGITUDE = 84°-13'-23"

OUTFALL (005)

WASTE STORAGE AREA II
(S01, S02)

RIVER INTAKE

POSEYVILLE LANDFILL

*6 BRINE POND

WASTE STORAGE AREA I
(S01)

INCINERATORS (S02, T03)
& 33 BLDG (S02, T01)
& 830 BLDG (S01)

1163 BLDG (S01, S02, T01)

TERTIARY POND (S04, T02)

FACILITY BOUNDARY

1925 LANDFILL

OUTFALL (031)

OUTFALL (001)

- ▲ INDICATES KNOWN DRINKING WATER WELLS AS OF 1996
- INDICATES CLOSED DISPOSAL WELLS

THE DOW CHEMICAL CO.
MIDLAND MI. - FACILITY #MID 000724724

SCALE : 1" = 2000'

DATE : 02-17-93

29 BLDG (S01, S02)

DIVERSION BASIN

SLUDGE DEWATERING
FACILITY

CLOSED WASTE MANAGEMENT UNITS

- 1925 LANDFILL
- POSEYVILLE LANDFILL
- SLUDGE DEWATERING FACILITY
- LEL I
- LEL II
- LEL III

REVISION					REVISION					DRAWING ISSUE RECORD					THE DOW CHEMICAL COMPANY				
REV.	DATE	BY	CHK	APP	REV.	DATE	BY	CHK	APP	REV.	DATE	BY	CHK	APP	PROJECT NUMBER	SCALE	DATE	PLN	PLN
A	02/17/93	LG	APV	APV	1	02/17/93	LG	APV	APV	1	02/17/93	LG	APV	APV	127122	1"=2000'	02-010-927122	2	PLN
B	02/17/93	LED	LEL	LEL	2	02/17/93	LED	LEL	LEL	2	02/17/93	LED	LEL	LEL	127122	1"=2000'	02-010-927122	2	PLN
C	02/17/93	LED	LEL	LEL	3	02/17/93	LED	LEL	LEL	3	02/17/93	LED	LEL	LEL	127122	1"=2000'	02-010-927122	2	PLN
D	02/17/93	LED	LEL	LEL	4	02/17/93	LED	LEL	LEL	4	02/17/93	LED	LEL	LEL	127122	1"=2000'	02-010-927122	2	PLN
E	02/17/93	LED	LEL	LEL	5	02/17/93	LED	LEL	LEL	5	02/17/93	LED	LEL	LEL	127122	1"=2000'	02-010-927122	2	PLN

ATTACHMENT 3

INCINERATOR COMPLIANCE SCHEDULE,
SITE-SPECIFIC RISK ASSESSMENT
AND AIR PERMIT RELATED INFORMATION

TABLE 1
SCHEDULE OF COMPLIANCE DUE DATES

Revised Septe. . . 19, 2002

Compliance Deadline	HWC MACT Compliance Milestone
September 30, 1999	HWC MACT Final Promulgation
December 6, 2001	HWC MACT Compliance Date Extended One Year
February 14, 2002	HWC MACT Interim Standards Rule Promulgation
March 31, 2003	Owner/operator must submit MACT Comprehensive Performance Test Plan and CMS Evaluation Test Plan (at least 1 year prior to conducting test)
September 30, 2003	Owner/operator must include Documentation of Compliance in operating record Complete preparation and implement all required compliance plans (SSMP, O&M Plan, Feedstream Analysis Plan, CMS Performance Evaluation Plan) Establish operator training and certification program
December 30, 2003	Agency deadline for approving or denying the Test Plan (9 months after receipt of plan)
January 30, 2004	Submit notification of owner/operator intent to conduct the Comprehensive Performance Test (at least 60 days prior to initiating test)
March 31, 2004	Commence the Comprehensive Performance Test & CMS Performance Evaluation Test
May 30, 2004	Complete Comprehensive Performance/CMS Test (within 60 days of commencing)
August 28, 2004	Owner/operator must submit the Notification of Compliance (90 days after test completion) to the Agency

STATE OF MICHIGAN
JOHN ENGLER, Governor



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RUSSELL J. HARDING, Director

AIR QUALITY DIVISION
HOLLISTER BUILDING, PO BOX 30260, LANSING MI 48909
INTERNET: <http://www.deq.state.mi.us/aq>

PUBLIC PARTICIPATION DOCUMENTS

For
The Dow Chemical Company
1261 Building
Midland, MI 48667

PERMIT APPLICATION NUMBER
212-00A

July 13, 2001

The Michigan Department of Environmental Quality (MDEQ) will not discriminate against any individual or on the basis of race, sex, religion, age, national origin, color, marital status, disability or political beliefs. Questions or concerns should be directed to the MDEQ Office of Personnel Services, P.O. Box 30473, Lansing, MI 48909.

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DEQ Michigan Department of Environmental Quality

FACT SHEET

July 13, 2001

Purpose and Summary

The Michigan Department of Environmental Quality, Air Quality Division (AQD) is proposing to act on Permit Application No. 212-00A from The Dow Chemical Company (Dow). The purpose of this permit application is to request approval to replace two existing hazardous waste incinerators with one new incinerator. The replacement incinerator is subject to permitting requirements pursuant to the Department's Rules for Air Pollution Control and will allow Dow to comply with the Maximum Achievable Control Technology (MACT) standard for hazardous waste combustors promulgated by the U.S. Environmental Protection Agency (EPA). Prior to acting on this application, the AQD is holding a 30-day public comment period and a public hearing to allow all interested parties the opportunity to comment on the Division's proposed action. The decision-maker will consider all relevant information received during the comment period and hearing before taking final action on the application.

Proposed Facility

Dow proposes to replace two existing incinerators with one upgraded incinerator at the Dow Facility. The two existing units combined are designed to incinerate waste that results in a total of 145 million BTU's per hour heat output. These incinerators are proposed to be replaced by a single incinerator with a capacity of 130 million BTU's per hour heat output. The proposed incinerator will consist of a rotary kiln, secondary combustion chamber (SCC), air pollution control (APC) train, air emission and parametric monitoring equipment, induced draft (I.D.) fans, and a stack.

Key Permit Review Issues

- The Dow Chemical Company is designated as an existing major stationary source under the federal Prevention of Significant Deterioration (PSD) regulations. The proposed hazardous waste incinerator will not be a major source modification because the net emissions increase for nitrogen oxides (NO_x) and the potential to emit for carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter less than 10 microns (PM-10), volatile organic compounds (VOCs), lead and hazardous air pollutants (HAPs), are less than the significant levels specified in the PSD regulations (40 CFR 52.21).
- The proposed incinerator is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants Subpart EEE for hazardous waste incinerators (Hazardous Waste Combustor MACT Rule). Owners and operators of hazardous waste incinerators must comply with emission standards of this rule by September 30, 2002. Dow has proposed an APC train consisting of a NO_x abatement reaction chamber, rapid quench, a condenser, a venturi scrubber, a demister/chlorine scrubber and multi-stage ionizing wet scrubber (IWS). The APC system is designed to achieve at a minimum the emission standards of the hazardous waste combustor MACT.
- The proposal is subject to the rules for toxic air contaminants (TACs) in the Department's administrative rules for air pollution control. In general, emission units subject to these rules must meet two major requirements:
 - 1) Best available control technology for toxics (T-BACT)
 - 2) Impacts of emissions must meet health-based screening levels
- The AQD also determined that Rule 228 might apply to this proposal. Rule 228 allows the Department, on a case-by-case basis, to require lower emission limits for TACs than T-BACT or the applicable screening levels would otherwise allow. The AQD therefore asked Dow to prepare and submit the following additional analyses of the impacts of TAC emissions from the proposed incinerator

- 1) A multipathway risk assessment for persistent bioaccumulative toxics
 - 2) An analysis of potential cumulative and interactive effects of TAC emissions
- Modeling was performed for emissions of NO_x, CO and PM-10. Impacts are all below the applicable National Ambient Air Quality Standards and PSD increments. Modeling for TAC and HAP emissions from the incinerator show impacts less than the applicable screening levels.

Key Aspects of Draft Permit Conditions

The draft permit conditions include the following to provide safeguards for the public's health and welfare:

- Emission limits for NO_x, SO₂, PM-10, CO, Hydrogen Chloride (HCl), Mercury, Semivolatile metals (SVM), low volatile metals (LVM), miscellaneous metals and dioxin/furans.
- Performance testing will be required for emissions of PM-10, CO, HCl, Mercury, SVM, LVM, miscellaneous metals and dioxin/furans
- Incinerator must achieve a destruction and removal efficiency (DRE) of 99.999%.
- Automatic Waste Feed Cutoff (AWFCO) requirements when operating parameters are exceeded.
- CO, O₂, NO_x, SO_x emissions and operating parameters monitored continuously
- Material throughput limits to ensure emission limits are not exceeded
- Records of emissions and operating information will be kept on file

Conclusion

Based on the analyses conducted to date, staff concludes that the proposed project will comply with all applicable federal air quality requirements and with all Michigan Department of Environmental Quality, Air Quality Division regulations. It is also staff's conclusion that this project, as proposed, would not violate the federal National Ambient Air Quality Standards and the federal PSD increments. Based on these conclusions, staff has developed draft permit terms and conditions attached to this fact sheet, which would ensure that the proposed incinerator's design and operation are enforceable and that sufficient monitoring, recordkeeping, and reporting would be performed by the applicant to determine compliance with these terms and conditions. If the permit application is deemed approvable, the delegated decision-maker may determine a need for additional or revised conditions to address issues raised during the public participation process.

Staff has prepared a "Technical Report" which contains more detailed information about the project. This document is attached. In addition, the applicant developed a "Human Health Risk Assessment for the Dow Chemical Incinerator Upgrade". A copy of this report is available, at a charge, from the AQD.

If you would like additional information about this proposal, please contact Mr. Brad Myott at 517-335-6978 or Mr. Paul Schleusener at 517-335-6828 of the Air Quality Division, Permit Section.

**FACT SHEET
STATE AND FEDERAL AIR REGULATIONS**

State Rule	Description of State Air Regulations
R 336.1201	Requires an Air Use Permit for new or modified equipment that emits, or could emit, an air pollutant. However, there are other rules that allow smaller emission sources to be installed without a permit (see Rules 336.1279 through 336.1290 below). Rule 336.1201 also states that the Department can add conditions to a permit to assure the air laws are met.
R 336.1205	Outlines the permit conditions that are required by the federal Prevention of Significant Deterioration Regulations (PSD) and/or Section 112 of the Clean Air Act. Also, the same types of conditions are added to their permit when a plant is limiting their air emissions to legally avoid these federal requirements. (See the Federal Regulations table for more details on PSD.)
R 336.1224	New or modified equipment that emits toxic air contaminants must use the Best Available Control Technology for Toxins (T-BACT). The T-BACT review determines what control technology must be applied to the equipment. A T-BACT review considers energy needs, environmental and economic impacts, and other costs. T-BACT may include a change in the raw materials used, the design of the process, or add-on air pollution control equipment. This rule also includes a list of instances where other regulations apply and T-BACT is not required.
R 336.1225 to R 336.1232	The concentration of each toxic air contaminant present in the outdoor air must be less than specified levels. These levels, called the initial risk screening level (IRSL) for cancer causing air contaminants and the initial threshold screening level (ITSL) for non-cancer causing air contaminants, are health-based standards. Air Quality Division Toxicologists develop these standards following the methods in the rules. The standards are designed to protect all humans, including the most sensitive populations such as the young, elderly, and ill.
R336.1279 to R 336.1290	These rules list equipment or processes that have very low emissions and do not need to get an Air Use permit. However, these sources must meet all requirements identified in the specific rule and other rules that apply.
R 336.1301	Limits how air emissions are allowed to look at the end of a stack. The color and intensity of the color of the emissions is called opacity.
R336.1331	The particulate emission limits for certain sources are listed. These limits apply to both new and existing equipment.
R336.1370	Material collected by air pollution control equipment, such as dust, must be disposed of in a manner, which does not cause more air emissions.
R336.1401 and 336.1402	Limit the sulfur dioxide emissions from power plants and other fuel burning equipment.
R336.1702	New equipment that emits VOCs is required to install the Best Available Control Technology (BACT). The technology is reviewed on a case-by-case basis. The VOC limits and/or work practice standards set for a particular piece of new equipment cannot be less restrictive than the RACT limits for existing equipment outlined in R336.1601 through 336.1651.
R336.1901	Prohibits the emission of an air contaminant in quantities that cause injurious effects to human health and welfare, or prevent the comfortable enjoyment of life and property. As an example, a violation may be cited if excessive amounts of odor emissions were found to be preventing residents from enjoying outdoor activities.
R336.1910	Air pollution control equipment must be installed, maintained, and operated in a satisfactory manner.
R336.1911	When requested by the Department, a facility must develop and submit a malfunction abatement plan (MAP). This plan is to prevent, detect, and correct malfunctions and equipment failures.
R336.1912	A facility is required to notify the Department if a condition arises which causes emissions that exceed the allowable emission rate in a rule and/or permit.
336.2001 to 336.2060	Allow the Department to request that a facility tests its emissions and to approve the protocol used for these tests.

**FACT SHEET
 STATE AND FEDERAL AIR REGULATIONS**

Citation	Description of Federal Air Regulations or Requirements
Section 109 of the Clean Air Act – National Ambient Air Quality Standards (NAAQS)	The United States Environmental Protection Agency has set maximum permissible levels for six pollutants. These National Ambient Air Quality Standards (NAAQS) are designed to protect the public health of everyone, including the most susceptible individuals, the children, elderly, and those with chronic respiratory ailments. The six pollutants, called the criteria pollutants, are carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter less than 10 microns, and sulfur dioxide. All areas in Michigan are meeting the NAAQS. Further, in Michigan, State Rules 336.1225 to 336.1232 are used to ensure the public health is protected from other compounds.
40 CFR 52.21 – Prevention of Significant Deterioration (PSD) Regulations Best Available Control Technology (BACT)	<p>The Prevention of Significant Deterioration (PSD) regulations allow the installation and operation of large new sources and the modification of existing large sources in areas that are meeting the NAAQS. The regulations define what is considered a large or significant source, or modification.</p> <p>In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing the best available control technology or BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.</p> <p>In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.</p>
40 CFR 60 – New Source Performance Standards (NSPS)	The United States Environmental Protection Agency has set national standards for specific sources of pollutants. These New Source Performance Standards (NSPS) apply to new or modified equipment in a particular industrial category. These NSPS set emissions limits or work practice standards for over 60 categories of sources.
Section 112 of the Clean Air Act Maximum Achievable Control Technology (MACT) Section 112g	<p>In the Clean Air Act, Congress listed 189 compounds as Hazardous Air Pollutants (HAPS). For facilities which emits, or could emit, HAPS above a certain level, one of the following two requirements must be met:</p> <p>1). The United States Environmental Protection Agency has established standards for specific types of sources. These Maximum Achievable Control Technology (MACT) standards are based upon the best-demonstrated control technology or practices found in similar sources.</p> <p>2). For sources where a MACT standard has not been established, the level of control technology required is determined on a case-by-case basis.</p>
Title IV of the federal Clean Air Act of 1990	Electric generating units which sell electricity to the grid and burn fossil fuel may be required to obtain and operate in compliance with a Phase II acid rain permit, pursuant to Title IV of the federal Clean Air Act.

Notes:

An "Air Use Permit", sometimes called a "Permit to Install", provides permission to emit air contaminants up to certain specified levels. These levels are set by state and federal law, and are set to protect public health and welfare. By staying within the levels set by the permit a facility is operating lawfully, and public health and air quality are protected.

The Air Quality Division does not have the authority to regulate noise, local zoning, property values, truck traffic, or lighting.

These tables list the most frequently applied state and federal regulations. Please refer to the draft permit conditions provided to determine which regulations apply.

Office of Solid Waste (5305W)

**Hazardous Waste Combustion (HWC) National
Emission Standards for Hazardous Air Pollutants
(NESHAP) Final Rule Fact Sheet:**



**RESOURCE CONSERVATION AND RECOVERY
ACT SITE-SPECIFIC RISK ASSESSMENT
POLICY FOR HAZARDOUS WASTE COMBUSTION FACILITIES**

EPA promulgated Maximum Achievable Control Technology (MACT) standards, also called the National Emission Standards for Hazardous Air Pollutants (NESHAP), for hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns (64 FR 52828, September 30, 1999). These standards are promulgated under joint authority of the Clean Air Act (CAA) and Resource Conservation and Recovery Act (RCRA). This fact sheet summarizes, for the convenience of all interested stakeholders, regulators, and industry, the RCRA Site-Specific Risk Assessment Policy for hazardous waste combustion facilities as articulated in the preamble to the final MACT standards. This fact sheet does not provide guidance on risk assessment methodology or articulate new policy.

Background

Sections 3004(a) and (q) of the Resource Conservation and Recovery Act (RCRA) require EPA to develop national standards for hazardous waste combustion facilities that are protective of human health and the environment. In addition, section 3005(c)(3) of RCRA, which we commonly refer to as the "omnibus authority" or "omnibus provision," gives EPA both the authority and responsibility to include additional terms and conditions in each RCRA facility permit, as necessary, to protect human health and the environment.

In 1981 and 1991, respectively, we issued RCRA combustion standards for incinerators (40 CFR part 264, subpart O) and boilers and industrial furnaces (40 CFR part 266, subpart H). Since that time, however, additional information became available which suggested that the standards may not have fully addressed the potential risk to humans from indirect exposures. Indirect exposures can occur as a result of contact with contaminated soil, plants, water or food. Because of our concern regarding indirect exposures, we strongly recommended in the 1994 *Hazardous Waste Minimization and Combustion Strategy* that site-specific risk assessments (SSRA) be conducted for each combustion facility seeking a RCRA permit. Permitting authorities could then use the results of the SSRAs to

determine, on a case-by-case basis, whether the operation of the combustors in accordance with the standards would be protective of human health and the environment. In those cases where a RCRA permitting authority identified a potentially significant risk, it could invoke the "omnibus authority" and augment the RCRA permit with additional conditions to those required under 40 CFR part 264 and part 266.

On September 30, 1999, we revised and updated our national standards for incinerators, cement kilns and light-weight aggregate kilns (64 FR 52828). We based the revised standards on the Maximum Achievable Control Technology (MACT) approach required under the Clean Air Act (CAA). This approach represented the maximum degree of hazardous air pollution reduction achievable through currently available emission control technologies.

Since the MACT standards are technology-based, we performed a national risk assessment to determine if they satisfied the RCRA mandate to protect human health and the environment. This national assessment was a multimedia, multipathway analysis addressing both human health and ecological risk. The assessment was predicated on the assumption that sources whose emissions are currently above the MACT standards will reduce their emissions to MACT levels and that sources whose emissions currently are below the standards will maintain their emissions at current levels. Based on this national assessment, we determined that sources complying with the MACT standards *generally* are not anticipated to pose an unacceptable risk to human health and the environment under RCRA. Thus, we concluded that the technology-based MACT standards met the protectiveness requirement of RCRA sections 3004(a) and (q).

Although comprehensive, the national risk assessment did contain several uncertainties and limitations. As a result, we could not conclude that the MACT standards would be protective of human health and the environment in all cases, i.e., that it would never be necessary to include additional permit conditions in a specific facility's permit pursuant to the omnibus provision of §3005(c)(3). For example, the national risk assessment did not include an evaluation of the potential risk posed by nondioxin products of incomplete combustion. In addition, the uncertainties associated with the mercury portion of the assessment were significant and limited the use of the analysis for drawing quantitative conclusions regarding the risk associated with the mercury MACT standard. Finally, the national risk assessment utilized generalized assumptions which may not be reflective of unique, site-specific considerations.¹ Thus, in some cases an SSRA may be necessary to confirm whether operation of a particular hazardous waste combustor in accordance with the MACT standards will be protective of human health and the environment under RCRA.

¹The human health and ecological combustion risk assessment guidance documents referenced at the end of this fact sheet contain our current recommendations of the methodology and assumptions that you should consider when conducting hazardous waste combustion SSRAs.

Revised Policy

As explained above, in the 1994 *Hazardous Waste Minimization and Combustion Strategy* we strongly recommended that an SSRA be considered for each combustion facility seeking a RCRA permit. In the preamble to the final hazardous waste combustion MACT standards, we articulated a revised policy for incinerators, cement kilns and light-weight aggregate kilns. Under the revised policy, we are recommending that permitting authorities evaluate the need for an SSRA on a case-by-case basis.

If an SSRA does demonstrate that operation in accordance with the MACT standards may not be protective of human health and the environment, permitting authorities may require additional conditions in the RCRA permit, pursuant to the omnibus authority. As with the original policy, permitting authorities must provide the justification for any omnibus-based permit conditions in the facility's administrative record. For hazardous waste combustors not subject to the September 1999 MACT standards, we continue to recommend that SSRAs be conducted as part of the RCRA permitting process.

For More Information

HWC NESHAP Final Rule - *Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors* (64 FR 52828, September 30, 1999). See Part Three, Section IV: *How Is RCRA's Site-Specific Risk Assessment Decision Process Impacted by this Rule?* Internet Address: <http://www.epa.gov/hwcmact/preamble.htm>

HWC NESHAP Background Document: *Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Wastes*. July 1999. EPA F-1999-RC2F-S0014 and S0015. Internet Address: <http://www.epa.gov/hwcmact/riskdocs.htm>

Combustion Strategy: *Strategy for Hazardous Waste Minimization and Combustion*. November 1994. Internet Address: <http://www.epa.gov/epaoswer/hazwaste/combust/general/strat-2.txt>

Human Health Combustion Risk Assessment Guidance: *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Volumes I - III*. July 1998. EPA530-D-98-001 A, B, and C. Internet Address: <http://www.epa.gov/epaoswer/hazwaste/combust/risk.htm>

Ecological Combustion Risk Assessment Guidance: *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Volumes I - III*. November 1999. EPA530-D-99-001 A, B, and C. Internet Address: <http://www.epa.gov/epaoswer/hazwaste/combust/ecorisk.htm>

ATTACHMENT 4

COMPLIANCE SCHEDULE FOR
ENVIRONMENTAL MONITORING AND CORRECTIVE ACTION

Attachment XIX-1. Dow Chemical Michigan Operations Compliance Activity Schedule
(Duration in Work Days)

ID	Task Name	Duration	Start	Finish
1	H-1. Investigation of Till Sand West of T-Pond	390 days	Mon 9/2/02	Fri 2/27/04
2	Prepare Outline of Scope	60 days	Mon 9/2/02	Fri 11/22/02
3	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 11/25/02	Fri 2/14/03
4	Prepare Investigation Plan	60 days	Mon 2/17/03	Fri 5/9/03
5	MDEQ Review of Investigation Plan	30 days	Mon 5/12/03	Fri 6/20/03
6	Implementation of Investigation Plan (Preliminary Completion)	180 days	Mon 6/23/03	Fri 2/27/04
7				
8	H-2. Northeast Perimeter GW Monitoring Program	270 days	Tue 10/1/02	Mon 10/13/03
9	Prepare Outline of Scope	60 days	Tue 10/1/02	Mon 12/23/02
10	Review Outline w/ MDEQ and Agree on Scope	60 days	Tue 12/24/02	Mon 3/17/03
11	Prepare Monitoring Program	60 days	Tue 3/18/03	Mon 6/9/03
12	MDEQ Review of Monitoring Program	30 days	Tue 6/10/03	Mon 7/21/03
13	Implementation of Monitoring Program	60 days	Tue 7/22/03	Mon 10/13/03
14				
15	H-3. Facility Surface Water Monitoring Program	478 days	Wed 1/1/03	Fri 10/29/04
16	Prepare Outline of Scope	208 days	Wed 1/1/03	Fri 10/17/03
17	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 10/20/03	Fri 1/9/04
18	Prepare Monitoring Program	120 days	Mon 1/12/04	Fri 6/25/04
19	MDEQ Review of Monitoring Program	30 days	Mon 6/28/04	Fri 8/6/04
20	Implementation of Monitoring Program	60 days	Mon 8/9/04	Fri 10/29/04
21				
22	H-4. Deep Sand Monitoring Program	300 days	Mon 2/3/03	Fri 3/26/04
23	Prepare Outline of Scope	90 days	Mon 2/3/03	Fri 6/6/03
24	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 6/9/03	Fri 8/29/03
25	Prepare Monitoring Program	60 days	Mon 9/1/03	Fri 11/21/03
26	MDEQ Review of Monitoring Program	30 days	Mon 11/24/03	Fri 1/2/04
27	Implementation of Monitoring Program	60 days	Mon 1/5/04	Fri 3/26/04
28				
29	H-5. Direct Contact To Soil Pathway Analysis	360 days	Tue 4/1/03	Mon 8/16/04
30	Prepare Outline of Scope	120 days	Tue 4/1/03	Mon 9/15/03
31	Review Outline w/MDEQ and Agree on Scope	60 days	Tue 9/16/03	Mon 12/8/03
32	Prepare Evaluation Plan	90 days	Tue 12/9/03	Mon 4/12/04
33	MDEQ Review of Evaluation Plan	30 days	Tue 4/13/04	Mon 5/24/04
34	Implementation of Evaluation Plan	60 days	Tue 5/25/04	Mon 8/16/04
35				
36	H-6. Enhanced Exposure Control, Phase II	736 days	Wed 5/1/02	Wed 2/23/05
37	Review Existing Data and Identify Phase II Area Activities in an Outline	239 days	Wed 5/1/02	Mon 3/31/03
38	Review Outline of Activities w/MDEQ and Agree on Scope	43 days	Tue 4/1/03	Thu 5/29/03
39	Prepare and Submit Phase II Area of Activities	45 days	Fri 5/30/03	Thu 7/31/03
40	MDEQ Review of Phase II Area Activities	44 days	Fri 8/1/03	Wed 10/1/03
41	Implementation of Phase II Activities	365 days	Thu 10/2/03	Wed 2/23/05
42				

Project: Compliance_Activity_Schedule_Revision_09_30_02

Date: Fri 10/4/02

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Attachment XIX-1. Dow Chemical Michigan Operations Compliance Activity Schedule
(Duration in Work Days)

ID	Task Name	Duration	Start	Finish	2002				2003				2004				2005				2006				2007				200
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
43	H-7. Chemical Disposal Well 3 (CD-3) Hydraulic Assessment	210 days	Mon 6/2/03	Fri 3/19/04																									
44	Prepare Activity Plan	30 days	Mon 6/2/03	Fri 7/11/03																									
45	Review Activity Plan w/ MDEQ and Agree on Scope	60 days	Mon 7/14/03	Fri 10/3/03																									
46	Prepare Hydraulic Assessment	30 days	Mon 10/6/03	Fri 11/14/03																									
47	MDEQ Review of Hydraulic Assessment	30 days	Mon 11/17/03	Fri 12/26/03																									
48	Implementation of Hydraulic Assessment	60 days	Mon 12/29/03	Fri 3/19/04																									
49																													
50	M-1. SDF Installation of Seven New Piezometers	210 days	Mon 4/1/02	Fri 1/17/03																									
51	Prepare Activity Plan	40 days	Mon 4/1/02	Fri 5/24/02																									
52	MDEQ Review of Activity Plan	80 days	Mon 5/27/02	Fri 9/13/02																									
53	Implementation of Activity Plan (Preliminary Completion)	90 days	Mon 9/16/02	Fri 1/17/03																									
54																													
55	M-2. Pure Oil RFI Phase I-type Investigation	390 days	Mon 6/2/03	Fri 11/26/04																									
56	Prepare Outline of Scope	60 days	Mon 6/2/03	Fri 8/22/03																									
57	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 8/25/03	Fri 11/14/03																									
58	Prepare Preliminary Assessment (PA)	60 days	Mon 11/17/03	Fri 2/6/04																									
59	MDEQ Review of PA	30 days	Mon 2/9/04	Fri 3/19/04																									
60	Implementation of PA (Preliminary Completion)	180 days	Mon 3/22/04	Fri 11/26/04																									
61																													
62	M-3. LEL I, II, III Hydraulic Monitoring/Maintenance Plan	450 days	Tue 7/1/03	Mon 3/21/05																									
63	Prepare Outline of Scope for Post Closure Management Plan	150 days	Tue 7/1/03	Mon 1/26/04																									
64	Review Outline w/ MDEQ and Agree on Scope	60 days	Tue 1/27/04	Mon 4/19/04																									
65	Prepare Post-Closure Management Plan	90 days	Tue 4/20/04	Mon 8/23/04																									
66	MDEQ Review of Management Plan	30 days	Tue 8/24/04	Mon 10/4/04																									
67	Implementation of Management Plan (Preliminary Completion)	120 days	Tue 10/5/04	Mon 3/21/05																									
68																													
69	M-4. Investigation of Channel Depth/Topography of the Tittabawassee River	348 days	Fri 8/1/03	Tue 11/30/04																									
70	Prepare Outline of Scope	40 days	Fri 8/1/03	Thu 9/25/03																									
71	Review Outline w/ MDEQ and Agree on Scope	60 days	Fri 9/26/03	Thu 12/18/03																									
72	Prepare Investigation Plan	60 days	Fri 12/19/03	Thu 3/11/04																									
73	MDEQ Review of Investigation Plan	30 days	Fri 3/12/04	Thu 4/22/04																									
74	Implementation of Investigation Plan (Preliminary Completion)	158 days	Fri 4/23/04	Tue 11/30/04																									
75																													
76	M-5. Indoor Air Pathway Analysis	330 days	Mon 6/2/03	Fri 9/3/04																									
77	Prepare Outline of Scope	120 days	Mon 6/2/03	Fri 11/14/03																									
78	Review Outline w/MDEQ and Agree on Scope	60 days	Mon 11/17/03	Fri 2/6/04																									
79	Prepare Evaluation Plan	60 days	Mon 2/9/04	Fri 4/30/04																									
80	MDEQ Review of Evaluation Plan	30 days	Mon 5/3/04	Fri 6/11/04																									
81	Implementation of Evaluation Plan	60 days	Mon 6/14/04	Fri 9/3/04																									
82																													
83																													
84																													

Project: Compliance_Activity_Schedule_Revision_09_30_02
Date: Fri 10/4/02

Task
Progress
Milestone

Summary
Rolled Up Task
Rolled Up Milestone

Rolled Up Progress
Split
External Tasks

Project Summary
Group By Summary

ID	Task Name	Duration	Start	Finish	2002				2003				2004				2005				2006				2007				200
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
85	M-6. Former East Power Plant Cooling Pond RFI Phase I-type Investigation	270 days	Wed 10/1/03	Tue 10/12/04																									
86	Prepare Preliminary Assessment (PA)	60 days	Wed 10/1/03	Tue 12/23/03																									
87	MDEQ Review of PA	30 days	Wed 12/24/03	Tue 2/3/04																									
88	Implementation of PA (Preliminary Completion)	180 days	Wed 2/4/04	Tue 10/12/04																									
89																													
90	L-1. Poseyville Landfill Post-Closure Corrective Action Monitoring/Maintenance Program (CAMMP)	480 days	Mon 2/2/04	Fri 12/2/05																									
91	Prepare Outline of Scope for Post-Closure Monitoring/Maintenance Program	180 days	Mon 2/2/04	Fri 10/8/04																									
92	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 10/11/04	Fri 12/31/04																									
93	Prepare Corrective Action Monitoring/Maintenance Program (CAMMP)	90 days	Mon 1/3/05	Fri 5/6/05																									
94	MDEQ Review of CAMMP	30 days	Mon 5/9/05	Fri 6/17/05																									
95	Implementation of CAMMP (Preliminary Completion)	120 days	Mon 6/20/05	Fri 12/2/05																									
96																													
97	L-2. Ash Pond RFI Phase I-type Investigation	270 days	Thu 4/1/04	Wed 4/13/05																									
98	Prepare Preliminary Assessment (PA)	60 days	Thu 4/1/04	Wed 6/23/04																									
99	MDEQ Review of PA	30 days	Thu 6/24/04	Wed 8/4/04																									
100	Implementation of PA (Preliminary Completion)	180 days	Thu 8/5/04	Wed 4/13/05																									
101																													
102	L-3. Overlook Park RFI Phase I-type Investigation	270 days	Mon 5/3/04	Fri 5/13/05																									
103	Prepare Preliminary Assessment (PA)	60 days	Mon 5/3/04	Fri 7/23/04																									
104	MDEQ Review of PA	30 days	Mon 7/26/04	Fri 9/3/04																									
105	Implementation of PA (Preliminary Completion)	180 days	Mon 9/6/04	Fri 5/13/05																									
106																													
107	L-4. Triangle Pond RFI Phase I-type Investigation	270 days	Tue 6/1/04	Mon 6/13/05																									
108	Prepare Preliminary Assessment	60 days	Tue 6/1/04	Mon 8/23/04																									
109	MDEQ Review of PA	30 days	Tue 8/24/04	Mon 10/4/04																									
110	Implementation of PA (Preliminary Completion)	180 days	Tue 10/5/04	Mon 6/13/05																									
111																													
112																													
113	L-5. No.6 Brine Pond (6-Pond) Research Study and Post Closure	400 days	Mon 8/2/04	Fri 2/10/06																									
114	Prepare Outline of Scope for Management Plan	40 days	Mon 8/2/04	Fri 9/24/04																									
115	Review Outline w/ MDEQ and Agree on Scope	60 days	Mon 9/27/04	Fri 12/17/04																									
116	Prepare Management Plan	90 days	Mon 12/20/04	Fri 4/22/05																									
117	MDEQ Review of Management Plan	30 days	Mon 4/25/05	Fri 6/3/05																									
118	Implementation of Management Plan (Preliminary Completion)	180 days	Mon 6/6/05	Fri 2/10/06																									
119																													
120	L-6. US-10 Tank Farm Report	180 days	Wed 1/1/03	Tue 9/9/03																									
121	Prepare Report	150 days	Wed 1/1/03	Tue 7/29/03																									
122	MDEQ Review of Report	30 days	Wed 7/30/03	Tue 9/9/03																									

Project: Compliance_Activity_Schedule_Revision_09_30_02
Date: Fri 10/4/02

Task



Summary



Rolled Up Progress



Project Summary



Progress



Rolled Up Task



Split



Group By Summary



Milestone



Rolled Up Milestone



External Tasks



- 6 **Implementation of Investigation Plan (Preliminary Completion)**
Period of performance dependant upon Plan schedule and season.
- 13 **Implementation of Monitoring Program**
Period of performance dependant upon Program schedule and season.
- 20 **Implementation of Monitoring Program**
Period of performance dependant upon Program schedule and season.
- 27 **Implementation of Monitoring Program**
Period of performance dependant upon Program schedule and season.
- 53 **Implementation of Activity Plan (Preliminary Completion)**
Period of performance dependant upon Plan schedule and season.
- 60 **Implementation of PA (Preliminary Completion)**
Period of performance dependant upon PA schedule and season.
The Outline of Scope and subsequent PA format will be developed for the Pure Oil Site and used as a template for the following sites: Ash Pond, Overlook Park, and Triangle Pond.
- 67 **Implementation of Management Plan (Preliminary Completion)**
Period of performance dependant upon Plan schedule and season.
- 74 **Implementation of Investigation Plan (Preliminary Completion)**
Period of performance dependant upon Plan schedule and season.
- 95 **Implementation of CAMMP (Preliminary Completion)**
Period of performance dependant upon CAMMP schedule and season.
- 100 **Implementation of PA (Preliminary Completion)**
Period of performance dependant upon PA schedule and season.
The Outline of Scope and subsequent PA format will be developed for the Pure Oil Site and used as a template for the following sites: Ash Pond, Overlook Park, and Triangle Pond.
- 105 **Implementation of PA (Preliminary Completion)**
Period of performance dependant upon PA schedule and season.
The Outline of Scope and subsequent PA format will be developed for the Pure Oil Site and used as a template for the following sites: Ash Pond, Overlook Park, and Triangle Pond.
- 110 **Implementation of PA (Preliminary Completion)**
Period of performance dependant upon PA schedule and season.
The Outline of Scope and subsequent PA format will be developed for the Pure Oil Site and used as a template for the following sites: Ash Pond, Overlook Park, and Triangle Pond.
- 118 **Implementation of Management Plan (Preliminary Completion)**
Period of performance dependant upon Plan schedule and season.

ATTACHMENT 5

LIST OF ACCEPTABLE WASTE TYPES FOR
MANAGEMENT AT THE MICHIGAN OPERATIONS, MIDLAND PLANT SITE

**LIST OF ACCEPTABLE WASTE TYPES
FOR MANAGEMENT AT THE
MICHIGAN OPERATIONS, MIDLAND PLANT SITE
MID 000 724 724**

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
001T	Incinerator Ash -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.				*	*
003T	Primary Wastewater Treatment Plant Solids -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.				*	*
004T	Secondary Wastewater Treatment Plant Effluent -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.			*		*
005T	Secondary Wastewater Treatment Plant Solids -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.			*	*	*
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene 1,1,2-trichloro-1,2,2-trifluoroethane, orthodichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of one or more of the above halogenated solvents or those solvents listed in F001, F004, F005; and still bottoms from the recovery of these spent solvents.	*	*	*	*	*
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005 and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*	*	*	*
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures and blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*	*	*	*
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	*	*	*	*	*
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-triachlorophenol).	*	*		*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	*	*		*	*
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	*	*		*	*
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.).	*	*	*	*	*
F024	Process wastes, including but not limited to, distillation, heavy ends, tars, and reactor cleanout wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	*	*	*	*	*
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra, penta-, or hexachlorobenzene under alkaline conditions.	*	*	*	*	*
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulation containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from pre purified 2,4,5-trichlorophenol as the sole component.).	*	*	*	*	*
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste numbers F020, F021, F022, F023, F026, and F027.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
F039	Leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under Subpart D, or from a mixture of wastes classified under Subparts C & D of this part. (Leachate resulting from the management of one or more of one or more of the following EPA Hazardous Wastes and no other Hazardous Waste retains its EPA Hazardous Waste Number (s): F020, F021, F022, F026, F027, and/or F028.)	*	*	*	*	*
K015	Still bottoms from the distillation of benzyl chloride.	*	*	*	*	*
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	*	*	*	*	*
K017	Heavy ends or still bottoms from the purification column in the production of epichlorohydrin.	*	*	*	*	*
K018	Heavy ends from the fractionation column in ethyl chloride production.	*	*	*	*	*
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	*	*	*	*	*
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	*	*	*	*	*
K021	Aqueous spend antimony catalyst waste from fluoromethanes production.	*	*	*	*	*
K022	Distillation bottom tars from the production of phenol or acetone from cumene.	*	*	*	*	*
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	*	*	*	*	*
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	*	*	*	*	*
K026	Stripping still tails from the production of methyl ethyl pyridines.	*	*	*	*	*
K027	Centrifuge and distillation residues from toluene diisocyanate production.	*	*	*	*	*
K028	Spend catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	*	*	*	*	*
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	*	*	*	*	*
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	*	*	*	*	*
K042	Heavy ends of distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	*	*	*	*	*
K043	2,6-Dichlorophenol waste from the production of 2,4-D	*	*	*	*	*
K049	Slop oil emulsion solids from the petroleum refining industry.	*	*	*	*	*
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	*	*	*	*	*
K051	API separator sludge from the petroleum refining industry.	*	*	*	*	*
K052	Tank bottoms (lead) from the petroleum refining industry.	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
K073	Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	*	*	*	*	*
K083	Distillation bottoms from aniline production	*	*	*	*	*
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	*	*	*	*	*
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	*	*	*	*	*
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	*	*	*	*	*
K099	Untreated wastewater from the production of 2,4-D	*	*	*	*	*
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	*	*	*	*	*
P001	Warfarin, & salts, when present at concentrations greater than 0.3%	*	*	*	*	*
P002	1-Acetyl-2-thiourea	*	*	*	*	*
P003	Acrolein	*	*	*	*	*
P004	Aldrin	*	*	*	*	*
P005	Allyl Alcohol	*	*	*	*	*
P006	Aluminum phosphide	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P007	5-(Aminomethyl)-3-isoxazolol	*	*	*	*	*
P008	4-Aminopyridine	*	*	*	*	*
P009	Ammonium picrate	*	*	*	*	*
P010	Arsenic Acid	*	*	*	*	*
P011	Arsenic pentoxide	*	*	*	*	*
P012	Arsenic trioxide	*	*	*	*	*
P013	Barium cyanide	*	*	*	*	*
P014	Benzenethiol	*	*	*	*	*
P015	Beryllium powder	*	*	*	*	*
P016	Dichloromethyl ether	*	*	*	*	*
P017	Bromoacetone	*	*	*	*	*
P018	Brucine	*	*	*	*	*
P020	2-sec-Butyl-4,6-Dinitrophenol (Dinoseb)	*	*	*	*	*
P021	Calcium cyanide (Ca(CN) ₂)	*	*	*	*	*
P022	Carbon disulfide	*	*	*	*	*
P023	Chloroacetaldehyde	*	*	*	*	*
P024	p-Chloroaniline	*	*	*	*	*
P026	1-(o-Chlorophenyl)thiourea	*	*	*	*	*
P027	3-Chloropropionitrile	*	*	*	*	*
P028	Benzyl chloride	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P029	Copper cyanide	*	*	*	*	*
P030	Cyanides (soluble cyanide salts) not elsewhere specified	*	*	*	*	*
P031	Cyanogen	*	*	*	*	*
P033	Cyanogen chloride	*	*	*	*	*
P034	2-Cyclohexyl-4,6-dinitrophenol	*	*	*	*	*
P036	Dichlorophenylarsine	*	*	*	*	*
P037	Dieldrin	*	*	*	*	*
P038	Diethylarsine	*	*	*	*	*
P039	Disulfoton	*	*	*	*	*
P040	O,O-Diethyl O-pyrazinyl phosphorothioate	*	*	*	*	*
P041	Diethyl-p-nitrophenyl phosphate	*	*	*	*	*
P042	Epinephrine	*	*	*	*	*
P043	Diisopropyl fluorophosphate	*	*	*	*	*
P044	Dimethoate	*	*	*	*	*
P045	Thiofanox	*	*	*	*	*
P046	alpha,alpha-Dimethylphenethylamine	*	*	*	*	*
P047	4,6-Dinitro-o-cresol and salts	*	*	*	*	*
P048	2,4-Dinitrophenol	*	*	*	*	*
P049	2,4-Dithiobiuret	*	*	*	*	*
P050	Endosulfan	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P051	Endrin	*	*	*	*	*
P054	Ethylenimine	*	*	*	*	*
P056	Flourine	*	*	*	*	*
P057	Fluoroacetamide	*	*	*	*	*
P058	Fluoroacetic acid, sodium salt	*	*	*	*	*
P059	Heptachlor	*	*	*	*	*
P060	Isodrin	*	*	*	*	*
P062	Hexaethyl tetraphosphate	*	*	*	*	*
P063	Hydrogen cyanide	*	*	*	*	*
P064	Methyl isocyanate	*	*	*	*	*
P065	Mercury fulminate	*	*	*	*	*
P066	Methomyl	*	*	*	*	*
P067	2-Methyl-aziridine	*	*	*	*	*
P068	Methyl hydrazine	*	*	*	*	*
P069	2-Methylactonitrile	*	*	*	*	*
P070	Aldicarb	*	*	*	*	*
P071	Methyl parathion	*	*	*	*	*
P072	1-Naphthyl-2-thiourea	*	*	*	*	*
P073	Nickel carbonyl	*	*	*	*	*
P074	Nickel cyanide	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P075	Nicotine and salts	*	*	*	*	*
P076	Nitric oxide	*	*	*	*	*
P077	p-Nitroaniline	*	*	*	*	*
P078	Nitrogen dioxide	*	*	*	*	*
P081	Nitroglycerine	*	*	*	*	*
P082	N-Nitrosodimethylamine	*	*	*	*	*
P084	N-Nitrosomethylvinylamine	*	*	*	*	*
P085	Octamethylpyrophosphoramide	*	*	*	*	*
P087	Osmium tetroxide	*	*	*	*	*
P088	Endothall	*	*	*	*	*
P089	Parathion	*	*	*	*	*
P092	Phenylmercuric acetate	*	*	*	*	*
P093	N-Phenylthiourea	*	*	*	*	*
P094	Phorate	*	*	*	*	*
P095	Phosgene	*	*	*	*	*
P096	Phosphine	*	*	*	*	*
P097	Famphur	*	*	*	*	*
P098	Potassium cyanide	*	*	*	*	*
P099	Potassium silver cyanide	*	*	*	*	*
P101	Ethyl Cyanide (Propanenitrile)	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P102	Propargyl alcohol	*	*	*	*	*
P103	Selenourea	*	*	*	*	*
P104	Silver cyanide	*	*	*	*	*
P105	Sodium azide	*	*	*	*	*
P106	Sodium cyanide	*	*	*	*	*
P108	Strychnidin-10-one, and salts	*	*	*	*	*
P109	Tetraethyldithiopyrophosphate	*	*	*	*	*
P110	Tetraethyl lead	*	*	*	*	*
P111	Tetraethylpyrophosphate	*	*	*	*	*
P112	Tetranitromethane	*	*	*	*	*
P113	Thallic oxide	*	*	*	*	*
P114	Thallium selenite	*	*	*	*	*
P115	Thallium (I) sulfate	*	*	*	*	*
P116	Thiosemicarbazide	*	*	*	*	*
P118	Trichloromethanethiol	*	*	*	*	*
P119	Ammonium vanadate	*	*	*	*	*
P120	Vanadium pentoxide	*	*	*	*	*
P121	Zinc cyanide	*	*	*	*	*
P122	Zinc phosphide, when present at concentrations greater than 10%	*	*	*	*	*
P123	Toxaphene	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
P127	Carbofuran	*	*	*	*	*
P128	Mexacarbate	*	*	*	*	*
P185	Tirpate	*	*	*	*	*
P188	Physostigmine salicylate	*	*	*	*	*
P189	Carbosulfan	*	*	*	*	*
P190	Metolcarb	*	*	*	*	*
P191	Dimetilan	*	*	*	*	*
P192	Isolan	*	*	*	*	*
P194	Oxamyl	*	*	*	*	*
P196	Manganese dimethyldithiocarbamate	*	*	*	*	*
P197	Formparanate	*	*	*	*	*
P198	Formetanate hydrochloride	*	*	*	*	*
P199	Methiocarb	*	*	*	*	*
P201	Promecarb	*	*	*	*	*
P202	m-Cumenyl methylcarbamate	*	*	*	*	*
P203	Aldicarb sulfone	*	*	*	*	*
P204	Physostigmine	*	*	*	*	*
P205	Ziram	*	*	*	*	*
U001	Acetaldehyde	*	*	*	*	*
U002	Acetone	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U003	Acetonitrile	*	*	*	*	*
U004	Acetophenone	*	*	*	*	*
U005	2-Acetylaminofluorene	*	*	*	*	*
U006	Acetyl chloride	*	*	*	*	*
U007	Acrylamide	*	*	*	*	*
U008	Acrylic acid	*	*	*	*	*
U009	Acrylonitrile	*	*	*	*	*
U010	Mitomycin	*	*	*	*	*
U011	Amitrole	*	*	*	*	*
U012	Aniline	*	*	*	*	*
U014	Auramine	*	*	*	*	*
U015	Azaserine	*	*	*	*	*
U016	Benz[c]acridine	*	*	*	*	*
U017	Benzal chloride	*	*	*	*	*
U018	Benz[a]anthracene	*	*	*	*	*
U019	Benzene	*	*	*	*	*
U020	Benzenesulfonyl chloride	*	*	*	*	*
U021	Benzidine	*	*	*	*	*
U022	Benzo[a]pyrene	*	*	*	*	*
U023	Benzotrichloride	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U024	bis(2-Chloroethoxy)methane	*	*	*	*	*
U025	bis(2-Chloroethyl)ether	*	*	*	*	*
U026	Chlornaphazine	*	*	*	*	*
U027	bis(2-Chloroisopropyl)ether	*	*	*	*	*
U028	bis(2-Ethylhexyl) phthalate	*	*	*	*	*
U029	Methyl bromide (Bromomethane)	*	*	*	*	*
U030	4-Bromophenyl phenyl ether	*	*	*	*	*
U031	n-Butyl alcohol	*	*	*	*	*
U032	Calcium chromate	*	*	*	*	*
U033	Carbon oxyfluoride	*	*	*	*	*
U034	Trichloroacetaldehyde (Chloral)	*	*	*	*	*
U035	Chlorambucil	*	*	*	*	*
U036	Chlordane, alpha & gamma isomers	*	*	*	*	*
U037	Chlorobenzene	*	*	*	*	*
U038	Chlorobenzilate	*	*	*	*	*
U039	p-Chloro-m-cresol	*	*	*	*	*
U041	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	*	*	*	*	*
U042	2-Chloroethyl vinyl ether	*	*	*	*	*
U043	Vinyl chloride	*	*	*	*	*
U044	Chloroform	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U045	Chloromethane	*	*	*	*	*
U046	Chloromethyl methyl ether	*	*	*	*	*
U047	2-Chloronaphthalene	*	*	*	*	*
U048	2-Chlorophenol	*	*	*	*	*
U049	4-Chloro-o-toluidine hydrochloride	*	*	*	*	*
U050	Chrysene	*	*	*	*	*
U051	Creosote	*	*	*	*	*
U052	Cresols (cresylic acid)	*	*	*	*	*
U053	Crotonaldehyde	*	*	*	*	*
U055	Cumene	*	*	*	*	*
U056	Cyclohexane	*	*	*	*	*
U057	Cyclohexanone	*	*	*	*	*
U058	Cyclophosphamide	*	*	*	*	*
U059	Daunomycin	*	*	*	*	*
U060	DDD	*	*	*	*	*
U061	DDT	*	*	*	*	*
U062	Diallate	*	*	*	*	*
U063	Dibenz[a,h]anthracene	*	*	*	*	*
U064	Dibenz[a,i]pyrene	*	*	*	*	*
U066	1,2-Dibromo-3-chloropropane	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U067	Ethylene dibromide (1,2-Dibromoethane)	*	*	*	*	*
U068	Dibromomethane	*	*	*	*	*
U069	Dibutyl phthalate	*	*	*	*	*
U070	o-Dichlorobenzene	*	*	*	*	*
U071	m-Dichlorobenzene	*	*	*	*	*
U072	p-Dichlorobenzene	*	*	*	*	*
U073	3,3'-Dichlorobenzidine	*	*	*	*	*
U074	1,4-Dichloro-2-butene	*	*	*	*	*
U075	Dichlorodifluoromethane	*	*	*	*	*
U076	1,1-Dichloroethane	*	*	*	*	*
U077	1,2-Dichloroethane	*	*	*	*	*
U078	1,1-Dichloroethylene	*	*	*	*	*
U079	1,2-Dichloroethylene	*	*	*	*	*
U080	Methylene Chloride	*	*	*	*	*
U081	2,4-Dichlorophenol	*	*	*	*	*
U082	2,6-Dichlorophenol	*	*	*	*	*
U083	1,2-Dichloropropane	*	*	*	*	*
U084	1,3-Dichloropropene	*	*	*	*	*
U085	1,2:3,4-Diepoxybutane	*	*	*	*	*
U086	N,N-Diethylhydrazine	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U087	O,O-Diethyl-S-methyl-dithiophosphate	*	*	*	*	*
U088	Diethyl phthalate	*	*	*	*	*
U089	Diethylstilbestrol	*	*	*	*	*
U090	Dihydrosafrole	*	*	*	*	*
U091	3,3'-Dimethoxybenzidine	*	*	*	*	*
U092	Dimethylamine	*	*	*	*	*
U093	Dimethylaminoazobenzene	*	*	*	*	*
U094	7,12-Dimethylbenz[a]anthracene	*	*	*	*	*
U095	3,3'-Dimethylbenzidine	*	*	*	*	*
U096	alpha,alpha-Dimethylbenzylhydroperoxide	*	*	*	*	*
U097	Dimethylcarbamoyl chloride	*	*	*	*	*
U098	1,1-Dimethylhydrazine	*	*	*	*	*
U099	1,2-Dimethylhydrazine	*	*	*	*	*
U101	2,4-Dimethylphenol	*	*	*	*	*
U102	Dimethyl phthalate	*	*	*	*	*
U103	Dimethyl sulfate	*	*	*	*	*
U105	2,4-Dinitrotoluene	*	*	*	*	*
U106	2,6-Dinitrotoluene	*	*	*	*	*
U107	Di-n-octyl phthalate	*	*	*	*	*
U108	1,4-Dioxane	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U109	1,2-Diphenylhydrazine	*	*	*	*	*
U110	Dipropylamine	*	*	*	*	*
U111	Di-n-propylnitrosamine	*	*	*	*	*
U112	Ethyl acetate	*	*	*	*	*
U113	Ethyl acrylate	*	*	*	*	*
U114	Ethylenebis(dithiocarbamic acid), salts & ester	*	*	*	*	*
U115	Ethylene oxide	*	*	*	*	*
U116	Ethylene thiourea	*	*	*	*	*
U117	Ethyl ether	*	*	*	*	*
U118	Ethyl methacrylate	*	*	*	*	*
U119	Ethyl methanesulfonate	*	*	*	*	*
U120	Fluoranthene	*	*	*	*	*
U121	Trichloromonofluoromethane	*	*	*	*	*
U122	Formaldehyde	*	*	*	*	*
U123	Formic acid	*	*	*	*	*
U124	Furan	*	*	*	*	*
U125	Furfural	*	*	*	*	*
U126	Glycidylaldehyde	*	*	*	*	*
U127	Hexachlorobenzene	*	*	*	*	*
U128	Hexachlorobutadiene	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U129	Lindane	*	*	*	*	*
U130	Hexachlorocyclopentadiene	*	*	*	*	*
U131	Hexachloroethane	*	*	*	*	*
U132	Hexachlorophene	*	*	*	*	*
U133	Hydrazine	*	*	*	*	*
U134	Hydrogen fluoride	*	*	*	*	*
U135	Hydrogen sulfide	*	*	*	*	*
U136	Cacodylic acid	*	*	*	*	*
U137	Indeno[1,2,3-cd]pyrene	*	*	*	*	*
U138	Iodomethane	*	*	*	*	*
U140	Isobutyl alcohol	*	*	*	*	*
U141	Isosafrole	*	*	*	*	*
U142	Kepone	*	*	*	*	*
U143	Lasiocarpine	*	*	*	*	*
U144	Lead acetate	*	*	*	*	*
U145	Lead phosphate	*	*	*	*	*
U146	Lead subacetate	*	*	*	*	*
U147	Maleic anhydride	*	*	*	*	*
U148	Maleic hydrazide	*	*	*	*	*
U149	Malononitrile	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U150	Melphalan	*	*	*	*	*
U151	Mercury	*	*	*	*	*
U152	Methacrylonitrile	*	*	*	*	*
U153	Methanethiol	*	*	*	*	*
U154	Methanol	*	*	*	*	*
U155	Methanpyrilene	*	*	*	*	*
U156	Methyl chlorocarbonate	*	*	*	*	*
U157	3-Methylcholanthrene	*	*	*	*	*
U158	4,4'Methylenebis(2-chloroaniline)	*	*	*	*	*
U159	Methyl ethyl ketone	*	*	*	*	*
U160	Methyl ethyl ketone peroxide	*	*	*	*	*
U161	Methyl isobutyl ketone	*	*	*	*	*
U162	Methyl methacrylate	*	*	*	*	*
U163	N-Methyl N'-nitro N-nitrosoguanidine	*	*	*	*	*
U164	Methylthiouracil	*	*	*	*	*
U165	Naphthalene	*	*	*	*	*
U166	1,4,Naphthoquinone	*	*	*	*	*
U167	1-Naphthylenamine	*	*	*	*	*
U168	2-Naphthylenamine	*	*	*	*	*
U169	Nitrobenzene	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U170	p-Nitrophenol	*	*	*	*	*
U171	2-Nitropropane	*	*	*	*	*
U172	N-Nitrosodi-n-butylamine	*	*	*	*	*
U173	N-Nitrosodiethanolamine	*	*	*	*	*
U174	N-Nitrosodiethylamine	*	*	*	*	*
U176	N-Nitroso-N-ethylurea	*	*	*	*	*
U177	N-Nitroso-N-methylurea	*	*	*	*	*
U178	N-Nitroso-N-methylurethane	*	*	*	*	*
U179	N-Nitrosopiperidine	*	*	*	*	*
U180	N-Nitrosopyrrolidine	*	*	*	*	*
U181	5-Nitro-o-toluidine	*	*	*	*	*
U182	Paraldehyde	*	*	*	*	*
U183	Pentachlorobenzene	*	*	*	*	*
U184	Pentachloroethane	*	*	*	*	*
U185	Pentachloronitrobenzene	*	*	*	*	*
U186	1,3-Pentadiene	*	*	*	*	*
U187	Phenacetin	*	*	*	*	*
U188	Phenol	*	*	*	*	*
U189	Phosphorous sulfide	*	*	*	*	*
U190	Phthalic anhydride	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U191	2-Picoline	*	*	*	*	*
U192	Pronamide	*	*	*	*	*
U193	1,3-Propane sultone	*	*	*	*	*
U194	1-Propanamine	*	*	*	*	*
U196	Pyridine	*	*	*	*	*
U197	p-Benzoquinone	*	*	*	*	*
U200	Reserpine	*	*	*	*	*
U201	Resorcinol	*	*	*	*	*
U202	Saccharin and salts	*	*	*	*	*
U203	Safrole	*	*	*	*	*
U204	Selenium dioxide	*	*	*	*	*
U205	Selenium disulfide	*	*	*	*	*
U206	Streptozotocin	*	*	*	*	*
U207	1,2,4,5-Tetrachlorobenzene	*	*	*	*	*
U208	1,1,1,2-Tetrachloroethane	*	*	*	*	*
U209	1,1,2,2-Tetrachloroethane	*	*	*	*	*
U210	Tetrachloroethylene	*	*	*	*	*
U213	Tetrahydrofuran	*	*	*	*	*
U214	Thallium(I) acetate	*	*	*	*	*
U215	Thallium(I) carbonate	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U216	Thallium(I) chloride	*	*	*	*	*
U216	Thallium chloride TICI	*	*	*	*	*
U217	Thallium(I) nitrate	*	*	*	*	*
U218	Thioacetamide	*	*	*	*	*
U219	Thiourea	*	*	*	*	*
U220	Toluene	*	*	*	*	*
U221	Toluenediamine	*	*	*	*	*
U222	o-Toluidine hydrochloride	*	*	*	*	*
U223	Toluene diisocyanate	*	*	*	*	*
U225	Bromoform (Tribromomethane)	*	*	*	*	*
U226	1,1,1-Trichloroethane	*	*	*	*	*
U227	1,1,2-Trichloroethane	*	*	*	*	*
U228	Trichloroethylene	*	*	*	*	*
U234	1,3,5-Trinitrobenzene	*	*	*	*	*
U235	Tris(2,3-dibromopropyl) phosphate	*	*	*	*	*
U236	Trypan blue	*	*	*	*	*
U237	Uracil mustard	*	*	*	*	*
U238	Urethane (ethylcarbamate)	*	*	*	*	*
U239	Xylenes	*	*	*	*	*
U240	2,4-D (2,4-Dichlorophenoxyacetic acid) and salts and esters	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U243	Hexachloropropylene	*	*	*	*	*
U244	Thiram	*	*	*	*	*
U246	Cyanogen bromide	*	*	*	*	*
U247	Methoxychlor	*	*	*	*	*
U248	Warfarin & salts, when present at concentrations of 0.3% or less	*	*	*	*	*
U249	Zinc phosphate, when present at concentrations of 10% or less	*	*	*	*	*
U271	Benomyl	*	*	*	*	*
U278	Bendiocarb	*	*	*	*	*
U279	Carbaryl	*	*	*	*	*
U280	Barban	*	*	*	*	*
U328	o-Toluidine	*	*	*	*	*
U353	p-Toluidine	*	*	*	*	*
U359	2-Ethoxyethanol	*	*	*	*	*
U364	Bendiocarb phenol	*	*	*	*	*
U367	Carbofuran phenol	*	*	*	*	*
U372	Carbendazim	*	*	*	*	*
U373	Propham	*	*	*	*	*
U387	Prosulfocarb	*	*	*	*	*
U389	Triallate	*	*	*	*	*
U394	A2213	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
U395	Diethylene glycol, dicarbamate	*	*	*	*	*
U404	Triethylamine	*	*	*	*	*
U409	Thiophanate – methyl	*	*	*	*	*
U410	Thiodicarb	*	*	*	*	*
U411	Propoxur	*	*	*	*	*
D001	Characteristic of ignitability	*	*			*
D002	Characteristic of corrosivity	*	*			*
D003	Characteristic of reactivity	*	*			*
D004	Arsenic	*	*	*	*	*
D005	Barium	*	*	*	*	*
D006	Cadmium	*	*	*	*	*
D007	Chromium	*	*	*	*	*
D008	Lead	*	*	*	*	*
D009	Mercury	*	*	*	*	*
D010	Selenium	*	*	*	*	*
D011	Silver	*	*	*	*	*
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethano naphthalene).	*	*	*	*	*
D013	Lindane (1,2,3,4,5,6-hexachloro-cyclohexane gamma isomer).	*	*	*	*	*
D014	Methoxychlor (1,1,1-Trichlor-2,2-bis (p-methoxyphenyl)ethane).	*	*	*	*	*
D015	Toxaphene (C10H10CL8 Technical chlorinated camphene, 67-69% chlorine).	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
D016	2,4-D (2,4-dichlorophenoxy acetic acid)	*	*	*	*	*
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid).	*	*	*	*	*
D018	Benzene	*	*	*	*	*
D019	Carbon tetrachloride	*	*	*	*	*
D020	Chlordane	*	*	*	*	*
D021	Chlorobenzene	*	*	*	*	*
D022	Chloroform	*	*	*	*	*
D023	o-Cresol	*	*	*	*	*
D024	m-Cresol	*	*	*	*	*
D025	p-Cresol	*	*	*	*	*
D026	Cresol	*	*	*	*	*
D027	1,4-Dichlorobenzene	*	*	*	*	*
D028	1,2-Dichloroethane	*	*	*	*	*
D029	1,1-Dichloroethylene	*	*	*	*	*
D030	2,4-Dinitrotoluene	*	*	*	*	*
D031	Heptachlor (and its hydroxide)	*	*	*	*	*
D032	Hexachlorobenzene	*	*	*	*	*
D033	Hexachloro-1,3-butadiene	*	*	*	*	*
D034	Hexachloroethane	*	*	*	*	*
D035	Methyl ethyl ketone	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
D036	Nitrobenzene	*	*	*	*	*
D037	Pentachlorophenol	*	*	*	*	*
D038	Pyridine	*	*	*	*	*
D039	Tetrachloroethylene	*	*	*	*	*
D040	Trichloroethylene	*	*	*	*	*
D041	2,4,5-Trichlorophenol	*	*	*	*	*
D042	2,4,6-Trichlorophenol	*	*	*	*	*
D043	Vinyl Chloride	*	*	*	*	*
001S	Aflatoxin	*	*	*	*	*
002S	2,3,7,8-Tetrachlorodibenzo-p-dioxin	*	*	*	*	*
003S	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	*	*	*	*	*
004S	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	*	*	*	*	*
005S	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	*	*	*	*	*
006S	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	*	*	*	*	*
007S	2,3,7,8-Tetrachlorodibenzo furan	*	*	*	*	*
001U	Actinomycin D	*	*	*	*	*
002U	Allyl chloride	*	*	*	*	*
003U	2-aminoanthraquinone	*	*	*	*	*
004U	Aminoazobenzene	*	*	*	*	*
005U	O-aminoazotoluene	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
006U	4-aminobiphenyl	*	*	*	*	*
007U	3-amino-9-ethyl carbazole	*	*	*	*	*
157U	3-amino-9-ethyl carbazole hydrochloride	*	*	*	*	*
008U	1-amino-2-methyl anthraquinone	*	*	*	*	*
009U	Anilazine	*	*	*	*	*
158U	Aniline hydrochloride	*	*	*	*	*
011U	o-Anisidine	*	*	*	*	*
012U	o-Anisidine hydrochloride	*	*	*	*	*
013U	Antimony (when in the form of particles 100 microns or less)	*	*	*	*	*
014U	Antimycin A	*	*	*	*	*
147U	Azinphos-ethyl	*	*	*	*	*
148U	Azinphos-methyl	*	*	*	*	*
159U	Azobenzene	*	*	*	*	*
015U	Barban	*	*	*	*	*
016U	Bendiocarb	*	*	*	*	*
017U	Benomyl	*	*	*	*	*
020U	Bromoxynil	*	*	*	*	*
160U	1,3-Butadiene	*	*	*	*	*
161U	Butyl benzyl phthalate	*	*	*	*	*
021U	2(p-tert-Butylphenoxy)-isopropyl-2-chloro- ethyl sulfite	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
022U	Captafol	*	*	*	*	*
023U	Captan	*	*	*	*	*
024U	Carbaryl	*	*	*	*	*
025U	Carbofuran	*	*	*	*	*
027U	Carbophenothion	*	*	*	*	*
028U	Chloramines	*	*	*	*	*
152U	Chlorfenuinphos	*	*	*	*	*
029U	Chloropyrifos	*	*	*	*	*
030U	Chlorinated dibenzofurans (other than those listed in Table 202)	*	*	*	*	*
031U	Chlorinated dioxins (other than those listed in Table 202)	*	*	*	*	*
032U	Chlorine gas	*	*	*	*	*
033U	2-Chloroethanol	*	*	*	*	*
034U	3-(Chloromethyl) pyridine hydrochloride	*	*	*	*	*
150U	p-Chlorphenol	*	*	*	*	*
162U	1-Chloro-4-phenoxybenzene	*	*	*	*	*
036U	4-chloro-m-phenylenediamine	*	*	*	*	*
037U	4-Chloro-o-phenylenediamine	*	*	*	*	*
038U	Chloroprene	*	*	*	*	*
163U	1-Chloropropene	*	*	*	*	*
151U	5-Chloro-o-toluidene	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
040U	Clonitralid	*	*	*	*	*
041U	Cobalt (when in the form of particles 100 microns or less)	*	*	*	*	*
042U	Coumaphos	*	*	*	*	*
043U	p-Cresidine	*	*	*	*	*
044U	Crotoxyphos	*	*	*	*	*
046U	Cycloheximide	*	*	*	*	*
164U	p,p' DDE	*	*	*	*	*
047U	Demeton	*	*	*	*	*
048U	2,4-Diaminoanisole sulfate	*	*	*	*	*
049U	4,4'-Diaminodiphenyl ether	*	*	*	*	*
050U	2,4-Diaminotoluene	*	*	*	*	*
051U	Diazinon	*	*	*	*	*
052U	Dichlone	*	*	*	*	*
054U	Dichlorvos	*	*	*	*	*
055U	Dichrotophos	*	*	*	*	*
056U	Diethyl sulfate	*	*	*	*	*
165U	N,N1-Diethylthiourea	*	*	*	*	*
057U	Dinocap	*	*	*	*	*
058U	Dioxathion	*	*	*	*	*
059U	EPN	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
166U	1,2-Epoxybutane	*	*	*	*	*
061U	Ethion	*	*	*	*	*
063U	Fensulfothion	*	*	*	*	*
064U	Fenthion	*	*	*	*	*
065U	Fluchloralin	*	*	*	*	*
068U	Hexamethyl phosphoramidate	*	*	*	*	*
070U	Hydroquinone	*	*	*	*	*
071U	N-(2-Hydroxyethyl) ethyleneimine	*	*	*	*	*
072U	Hypochlorite	*	*	*	*	*
073U	Isonicotinic acid hydrazine	*	*	*	*	*
167U	Kanechlor C	*	*	*	*	*
074U	Ketene	*	*	*	*	*
075U	Lactonitril	*	*	*	*	*
076U	Leptophos	*	*	*	*	*
077U	Lithium and compounds	*	*	*	*	*
078U	Malachite green	*	*	*	*	*
079U	Malathion	*	*	*	*	*
080U	Mestranol	*	*	*	*	*
082U	4,4'-Methylenebis (2-methylaniline)	*	*	*	*	*
083U	4,4'-Methylenebis (N,N-dimethylaniline)	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
086U	1-Methylnaphthalene	*	*	*	*	*
088U	Mevinphos	*	*	*	*	*
089U	Mexacarbate	*	*	*	*	*
090U	Mirex	*	*	*	*	*
092U	Monocrotophos	*	*	*	*	*
093U	Mustard gas	*	*	*	*	*
094U	Naled	*	*	*	*	*
095U	1,5-Napthalenediamine	*	*	*	*	*
096U	Nickel (when in the form of 100 microns or less)	*	*	*	*	*
097U	Niridazole	*	*	*	*	*
098U	Nithiazide	*	*	*	*	*
099U	5-Nitroacenaphthene	*	*	*	*	*
100U	Nitro-o-anisidine	*	*	*	*	*
101U	Nitrobiphenyl	*	*	*	*	*
102U	Nitrofen	*	*	*	*	*
103U	N-(4-(5-nitro-2-furanyl)-2-thiazolyl)-acetamide	*	*	*	*	*
104U	Nitrogen mustard	*	*	*	*	*
106U	p-Nitrosodiphenylamine	*	*	*	*	*
168U	N-Nitromethylvinylamine	*	*	*	*	*
108U	N-nitroso-N-phenylhydroxylamine, ammonium salt	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
169U	Octachlorostyrene	*	*	*	*	*
110U	Oxydemeton-methyl	*	*	*	*	*
111U	Paraquat	*	*	*	*	*
112U	Peroxyacetic acid	*	*	*	*	*
113U	Phenazopyridine hydrochloride	*	*	*	*	*
114U	Phenesterin	*	*	*	*	*
115U	Phenolbarbitol	*	*	*	*	*
116U	Phenytoin	*	*	*	*	*
117U	Phenytoin sodium	*	*	*	*	*
118U	Phosazetim	*	*	*	*	*
119U	Phosmet	*	*	*	*	*
120U	Phosphamidon	*	*	*	*	*
121U	Piperonyl sulfoxide	*	*	*	*	*
122U	Polybrominated biphenyls (PBB)	*	*	*	*	*
124U	Propiolactone	*	*	*	*	*
127U	Propylthiouracil	*	*	*	*	*
128U	Rotenone	*	*	*	*	*
129U	Semicarbazide	*	*	*	*	*
170U	Semicarbazide	*	*	*	*	*
153U	Sodium fluoroacetate	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
131U	Styrene	*	*	*	*	*
132U	Sulfallate	*	*	*	*	*
134U	TDE	*	*	*	*	*
135U	TEPP	*	*	*	*	*
136U	Terbufos	*	*	*	*	*
137U	Tetrachlorovinphos	*	*	*	*	*
138U	4,4'-Thiodianiline	*	*	*	*	*
139U	0-Toluidine	*	*	*	*	*
140U	Triaryl phosphate esters	*	*	*	*	*
154U	Bis(tri-n-butyl tin) oxide	*	*	*	*	*
171U	Tributyltin (and other salts and esters)	*	*	*	*	*
172U	1,2,3-Trichlorobenzene	*	*	*	*	*
173U	1,2,4-Trichlorobenzene	*	*	*	*	*
141U	Trichlorfon	*	*	*	*	*
142U	Trifluralin	*	*	*	*	*
143U	2,4,5-Trimethylaniline	*	*	*	*	*
144U	Triamethylphosphate	*	*	*	*	*
174U	Urethane	*	*	*	*	*
175U	Vinyl bromide	*	*	*	*	*
155U	Vinylidene chloride	*	*	*	*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	WSA I	WSA II	T-POND	1163 BLDG	INCIN STORAGE
146U	Ziram	*	*	*	*	*

ATTACHMENT 6

LIST OF ACCEPTABLE WASTE TYPES FOR
MANAGEMENT AT THE SALZBURG ROAD LANDFILL

**LIST OF ACCEPTABLE WASTE TYPES FOR MANAGEMENT
AT THE SALZBURG LANDFILL MID 980 617 435**

Note: The hazardous waste codes in the FAC/INC PERMIT column are codes that are handled at the TSDF facility and are primarily treated by incineration. Due to the mixture and derived-from rule, the incinerator ash carries these codes, so the Salzburg Road Landfill must be licensed to receive these waste codes. Incinerator ash, and other hazardous wastes that carry one or more of these hazardous waste codes, may be disposed at the Salzburg Landfill provided they meet the applicable Land Disposal Restrictions treatment standards listed in 40 CFR Part 268.

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
Not Applicable	Compatible non-hazardous solid waste (including, but not limited to, asbestos, soils, rubble, and process waste and containers), provided the licensee complies with the most stringent regulatory requirements of Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), or Part 115, Solid Waste Management, of Act 451.			*	
001T	Incinerator Ash -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.	*	*		*
003T	Primary Wastewater Treatment Plant Solids -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.	*			*
004T	Secondary Effluent -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.				
005T	Secondary Wastewater Treatment Plant Solids -- Hazardous waste by definition/residue of hazardous waste management -- may carry all waste codes managed by generating unit.			*	*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	*	*		*
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene 1,1,2-trichloro-1,2,2-trifluoroethane, orthodichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of one or more of the above halogenated solvents or those solvents listed in F001, F004, F005; and still bottoms from the recovery of these spent solvents.	*	*		*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of of the above non-halogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005 and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*		*
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*		*
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures and blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	*	*		*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	*	*		*
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol).	*	*		*
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	*	*		*
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	*	*		*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.).	*	*		*
F024	Process wastes, including but not limited to, distillation, heavy ends, tars, and reactor cleanout wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine.	*	*		*
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra, penta-, or hexachlorobenzene under alkaline conditions.	*	*		*
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulation containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from pre purified 2,4,5-trichlorophenol as the sole component.).	*	*		*
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste numbers F020, F021, F022, F023, F026, and F027.	*	*		*
F029	No longer a code	*	*		

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
F039	Leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under Subpart D, or from a mixture of wastes classified under Subparts C & D of this part. (Leachate resulting from the management of one or more of one or more of the following EPA Hazardous Wastes and no other Hazardous Waste retains its EPA Hazardous Waste Number (s): F020, F021, F022, F026, F027, and/or F028.)		*		*
K015	Still bottoms from the distillation of benzyl chloride.	*			*
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.				*
K017	Heavy ends or still bottoms from the purification column in the production of epichlorohydrin.				*
K018	Heavy ends from the fractionation column in ethyl chloride production.				*
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.				*
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.				*
K021	Aqueous spend antimony catalyst waste from fluoromethanes production.				*
K022	Distillation bottom tars from the production of phenol or acetone from cumene.				*
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.				*
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.				*
K026	Stripping still tails from the production of methyl ethyl pyridines.				*
K027	Centrifuge and distillation residues from toluene diisocyanate production.				*
K028	Spend catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.				*
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.				*
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.				*
K042	Heavy ends of distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	*			*
K043	2,6-Dichlorophenol waste from the production of 2,4-D	*			*
K049	Slop oil emulsion solids from the petroleum refining industry.	*			*
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	*			*
K051	API separator sludge from the petroleum refining industry.	*			*
K052	Tank bottoms (leaded) from the petroleum refining industry.	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
K073	Chlorinated hydrocarbon wastes from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	*			*
K083	Distillation bottoms from aniline production				*
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	*			*
K095	Distillation bottoms from the production of 1,1,1-trichloroethane				*
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane				*
K099	Untreated wastewater from the production of 2,4-D	*			*
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P001	Warfarin,& salts, when present at concentrations greater than 0.3%				*
P002	1-Acetyl-2-thiourea	*			*
P003	Acrolein	*			*
P004	Aldrin	*			*
P005	Allyl Alcohol	*			*
P006	Aluminum phosphide				*
P007	5-(Aminomethyl)-3-isoxazolol	*			*
P008	4-Aminopyridine	*			*
P009	Ammonium picrate	*			*
P010	Arsenic Acid	*			*
P011	Arsenic pentoxide				*
P012	Arsenic trioxide	*			*
P013	Barium cyanide	*			*
P014	Benzenethiol	*			*
P015	Beryllium powder	*			*
P016	Dichloromethyl ether	*			*
P017	Bromoacetone	*			*
P018	Brucine	*			*
P020	2-sec-Butyl-4,6-Dinitrophenol (Dinoseb)	*			*
P021	Calcium cyanide (Ca(CN) ₂)	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P022	Carbon disulfide	*			*
P023	Chloroacetaldehyde	*			*
P024	p-Chloroaniline	*			*
P026	1-(o-Chlorophenyl)thiourea	*			*
P027	3-Chloropropionitrile	*			*
P028	Benzyl chloride	*			*
P029	Copper cyanide	*			*
P030	Cyanides (soluble cyanide salts) not elsewhere specified	*			*
P031	Cyanogen	*			*
P033	Cyanogen chloride	*			*
P034	2-Cyclohexyl-4,6-dinitrophenol	*			*
P036	Dichlorophenylarsine	*			*
P037	Dieldrin	*			*
P038	Diethylarsine	*			*
P039	Disulfoton	*			*
P040	O,O-Diethyl O-pyrazinyl phosphorothioate	*			*
P041	Diethyl-p-nitrophenyl phosphate	*			*
P042	Epinephrine	*			*
P043	Diisopropyl fluorophosphate	*			*
P044	Dimethoate	*			*
P045	Thiofanox	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P046	alpha,alpha-Dimethylphenethylamine	*			*
P047	4,6-Dinitro-o-cresol and salts	*			*
P048	2,4-Dinitrophenol	*			*
P049	2,4-Dithiobiuret	*			*
P050	Endosulfan	*			*
P051	Endrin	*			*
P054	Ethylenimine	*			*
P056	Flourine	*			*
P057	Fluoroacetamide	*			*
P058	Fluoroacetic acid, sodium salt	*			*
P059	Heptachlor	*			*
P060	Isodrin	*			*
P062	Hexaethyl tetraphosphate	*			*
P063	Hydrogen cyanide	*			*
P064	Methyl isocyanate	*			*
P065	Mercury fulminate	*			*
P066	Methomyl	*			*
P067	2-Methyl-aziridine	*			*
P068	Methyl hydrazine	*			*
P069	2-Methylactonitrile	*			*
P070	Aldicarb	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P071	Methyl parathion	*			*
P072	1-Naphthyl-2-thiourea	*			*
P073	Nickel carbonyl	*			*
P074	Nickel cyanide	*			*
P075	Nicotine and salts	*			*
P076	Nitric oxide	*			*
P077	p-Nitroaniline	*			*
P078	Nitrogen dioxide	*			*
P081	Nitroglycerine	*			*
P082	N-Nitrosodimethylamine	*			*
P083	No longer a code	*			
P084	N-Nitrosomethylvinylamine	*			*
P085	Octamethylpyrophosphoramidate	*			*
P087	Osmium tetroxide	*			*
P088	Endothall	*			*
P089	Parathion	*			*
P092	Phenylmercuric acetate	*			*
P093	N-Phenylthiourea	*			*
P094	Phorate	*			*
P095	Phosgene				*
P096	Phosphine	*			*

P097	Famphur	*			*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P098	Potassium cyanide	*			*
P099	Potassium silver cyanide	*			*
P101	Ethyl Cyanide (Propanenitrile)	*			*
P102	Propargyl alcohol	*			*
P103	Selenourea	*			*
P104	Silver cyanide	*			*
P105	Sodium azide	*			*
P106	Sodium cyanide	*			*
P107	No longer a code	*			
P108	Strychnidin-10-one, and salts	*			*
P109	Tetraethyldithiopyrophosphate	*			*
P110	Tetraethyl lead	*			*
P111	Tetraethylpyrophosphate	*			*
P112	Tetranitromethane	*			*
P113	Thallic oxide	*			*
P114	Thallium selenite	*			*
P115	Thallium (I) sulfate	*			*
P116	Thiosemicarbazide	*			*
P118	Trichloromethanethiol	*			*
P119	Ammonium vanadate	*			*
P120	Vanadium pentoxide	*			*

P121	Zinc cyanide	*			*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
P122	Zinc phosphide, when present at concentrations greater than 10%	*			*
P123	Toxaphene				*
P127	Carbofuran				*
P128	Mexacarbate				*
P185	Tirpate				*
P188	Physostigmine salicylate				*
P189	Carbosulfan				*
P190	Metolcarb				*
P191	Dimetilan				*
P192	Isolan				*
P194	Oxamyl				*
P196	Manganese dimethyldithiocarbamate				*
P197	Formparanate				*
P198	Formetanate hydrochloride				*
P199	Methiocarb				*
P201	Promecarb				*
P202	m-Cumenyl methylcarbamate				*
P203	Aldicarb sulfone				*
P204	Physostigmine				*
P205	Ziram				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U001	Acetaldehyde	*			*
U002	Acetone				*
U003	Acetonitrile				*
U004	Acetophenone	*			*
U005	2-Acetylaminofluorene	*			*
U006	Acetyl chloride	*			*
U007	Acrylamide	*			*
U008	Acrylic acid				*
U009	Acrylonitrile				*
U010	Mitomycin	*			*
U011	Amitrole	*			*
U012	Aniline				*
U014	Auramine	*			*
U015	Azaserine	*			*
U016	Benz[c]acridine	*			*
U017	Benzal chloride	*			*
U018	Benz[a]anthracene	*			*
U019	Benzene	*			*
U020	Benzenesulfonyl chloride	*			*
U021	Benzidine	*			*
U022	Benzo[a]pyrene	*			*

U023	Benzotrichloride	*			*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U024	bis(2-Chloroethoxy)methane	*			*
U025	bis(2-Chloroethyl)ether	*			*
U026	Chlornaphazine	*			*
U027	bis(2-Chloroisopropyl)ether	*			*
U028	bis(2-Ethylhexyl) phthalate	*			*
U029	Methyl bromide (Bromomethane)				*
U030	4-Bromophenyl phenyl ether	*			*
U031	n-Butyl alchohol	*			*
U032	Calcium chromate	*			*
U033	Carbon oxyfluoride	*			*
U034	Trichloroacetaldehyde (Chloral)				*
U035	Chlorambucil	*			*
U036	Chlordane, alpha & gamma isomers	*			*
U037	Chlorobenzene	*			*
U038	Chlorobenzilate	*			*
U039	p-Chloro-m-cresol	*			*
U041	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	*			*
U042	2-Chloroethyl vinyl ether	*			*
U043	Vinyl chloride	*			*
U044	Chloroform	*			*
U045	Chloromethane				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U046	Chloromethyl methyl ether				*
U047	2-Chloronaphthalene	*			*
U048	2-Chlorophenol	*			*
U049	4-Chloro-o-toluidine hydrochloride	*			*
U050	Chrysene	*			*
U051	Creosote	*			*
U052	Cresols (cresylic acid)	*			*
U053	Crotonaldehyde	*			*
U055	Cumene				*
U056	Cyclohexane				*
U057	Cyclohexanone	*			*
U058	Cyclophosphamide	*			*
U059	Daunomycin	*			*
U060	DDD	*			*
U061	DDT	*			*
U062	Diallate	*			*
U063	Dibenz[a,h]anthracene	*			*
U064	Dibenz[a,i]pyrene	*			*
U066	1,2-Dibromo-3-chloropropane	*			*
U067	Ethylene dibromide (1,2-Dibromoethane)	*			*
U068	Dibromomethane	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U069	Dibutyl phthalate	*			*
U070	o-Dichlorobenzene	*			*
U071	m-Dichlorobenzene	*			*
U072	p-Dichlorobenzene	*			*
U073	3,3'-Dichlorobenzidine	*			*
U074	1,4-Dichloro-2-butene	*			*
U075	Dichlorodifluoromethane				*
U076	1,1-Dichloroethane	*			*
U077	1,2-Dichloroethane	*			*
U078	1,1-Dichloroethylene	*			*
U079	1,2-Dichloroethylene	*			*
U080	Methylene Chloride	*			*
U081	2,4-Dichlorophenol				*
U082	2,6-Dichlorophenol	*			*
U083	1,2-Dichloropropane	*			*
U084	1,3-Dichloropropene	*			*
U085	1,2:3,4-Diepoxybutane	*			*
U086	N,N-Diethylhydrazine	*			*
U087	O,O-Diethyl-S-methyl-dithiophosphate	*			*
U088	Diethyl phthalate	*			*
U089	Diethylstilbestrol	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U090	Dihydrosafrole	*			*
U091	3,3'-Dimethoxybenzidine	*			*
U092	Dimethylamine	*			*
U093	Dimethylaminoazobenzene	*			*
U094	7,12-Dimethylbenz[a]anthracene	*			*
U095	3,3'-Dimethylbenzidine	*			*
U096	alpha,alpha-Dimethylbenzylhydroperoxide	*			*
U097	Dimethylcarbamoyl chloride	*			*
U098	1,1-Dimethylhydrazine	*			*
U099	1,2-Dimethylhydrazine	*			*
U101	2,4-Dimethylphenol	*			*
U102	Dimethyl phthalate				*
U103	Dimethyl sulfate	*			*
U105	2,4-Dinitrotoluene	*			*
U106	2,6-Dinitrotoluene	*			*
U107	Di-n-octyl phthalate	*			*
U108	1,4-Dioxane	*			*
U109	1,2-Diphenylhydrazine	*			*
U110	Dipropylamine	*			*
U111	Di-n-propylnitrosamine	*			*
U112	Ethyl acetate				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U113	Ethyl acrylate				*
U114	Ethylenebis(dithiocarbamic acid), salts & ester	*			*
U115	Ethylene oxide				*
U116	Ethylene thiourea	*			*
U117	Ethyl ether	*			*
U118	Ethyl methacrylate	*			*
U119	Ethyl methanesulfonate	*			*
U120	Fluoranthene	*			*
U121	Trichloromonofluoromethane	*			*
U122	Formaldehyde				*
U123	Formic acid				*
U124	Furan	*			*
U125	Furfural	*			*
U126	Glycidylaldehyde	*			*
U127	Hexachlorobenzene	*			*
U128	Hexachlorobutadiene	*			*
U129	Lindane	*			*
U130	Hexachlorocyclopentadiene	*			*
U131	Hexachloroethane	*			*
U132	Hexachlorophene	*			*
U133	Hydrazine	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U134	Hydrogen fluoride	*			*
U135	Hydrogen sulfide				*
U136	Cacodylic acid	*			*
U137	Indeno[1,2,3-cd]pyrene	*			*
U138	Iodomethane	*			*
U139	No longer a code	*			
U140	Isobutyl alcohol	*			*
U141	Isosafrole	*			*
U142	Kepone	*			*
U143	Lasiocarpine	*			*
U144	Lead acetate	*			*
U145	Lead phosphate	*			*
U146	Lead subacetate	*			*
U147	Maleic anhydride				*
U148	Maleic hydrazide	*			*
U149	Malononitrile	*			*
U150	Melphalan	*			*
U151	Mercury	*			*
U152	Methacrylonitrile				*
U153	Methanethiol	*			*
U154	Methanol				*

U155	Methanpyrilene	*			*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U156	Methyl chlorocarbonate	*			*
U157	3-Methylcholanthrene	*			*
U158	4,4'Methylenebis(2-chloroaniline)	*			*
U159	Methyl ethyl ketone				*
U160	Methyl ethyl ketone peroxide	*			*
U161	Methyl isobutyl ketone				*
U162	Methyl methacrylate				*
U163	N-Methyl N'-nitro N-nitrosoguanidine	*			*
U164	Methylthiouracil	*			*
U165	Naphthalene	*			*
U166	1,4,Naphthoquinone	*			*
U167	1-Naphthylenamine	*			*
U168	2-Naphthylenamine	*			*
U169	Nitrobenzene	*			*
U170	p-Nitrophenol	*			*
U171	2-Nitropropane	*			*
U172	N-Nitrosodi-n-butylamine	*			*
U173	N-Nitrosodiethanolamine	*			*
U174	N-Nitrosodiethylamine	*			*
U176	N-Nitroso-N-ethylurea	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U177	N-Nitroso-N-methylurea	*			*
U178	N-Nitroso-N-methylurethane	*			*
U179	N-Nitrosopiperidine	*			*
U180	N-Nitrosopyrrolidine	*			*
U181	5-Nitro-o-toluidine	*			*
U182	Paraldehyde	*			*
U183	Pentachlorobenzene	*			*
U184	Pentachloroethane	*			*
U185	Pentachloronitrobenzene	*			*
U186	1,3-Pentadiene	*			*
U187	Phenacetin	*			*
U188	Phenol				*
U189	Phosphorous sulfide	*			*
U190	Phthalic anhydride				*
U191	2-Picoline	*			*
U192	Pronamide	*			*
U193	1,3-Propane sultone	*			*
U194	1-Propanamine	*			*
U196	Pyridine				*
U197	p-Benzoquinone	*			*
U200	Reserpine	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U201	Resorcinol	*			*
U202	Saccharin and salts	*			*
U203	Safrole	*			*
U204	Selenium dioxide	*			*
U205	Selenium disulfide	*			*
U206	Streptozotocin	*			*
U207	1,2,4,5-Tetrachlorobenzene	*			*
U208	1,1,1,2-Tetrachloroethane	*			*
U209	1,1,2,2-Tetrachloroethane	*			*
U210	Tetrachloroethylene	*			*
U211	No longer a code	*			
U212	No longer a code	*			
U213	Tetrahydrofuran	*			*
U214	Thallium(I) acetate	*			*
U215	Thallium(I) carbonate	*			*
U216	Thallium(I) chloride	*			*
U216	Thallium chloride TICI	*			*
U217	Thallium(I) nitrate	*			*
U218	Thioacetamide	*			*
U219	Thiourea	*			*
U220	Toluene				*

U221	Toluenediamine				*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U222	o-Toluidine hydrochloride	*			*
U223	Toluene diisocyanate	*			*
U225	Bromoform (Tribromomethane)	*			*
U226	1,1,1-Trichloroethane				*
U227	1,1,2-Trichloroethane				*
U228	Trichloroethylene	*			*
U230	No longer a code	*			
U231	No longer a code	*			
U233	No longer a code	*			
U234	1,3,5-Trinitrobenzene	*			*
U235	Tris(2,3-dibromopropyl) phosphate	*			*
U236	Trypan blue	*			*
U237	Uracil mustard	*			*
U238	Urethane (ethylcarbamate)	*			*
U239	Xylenes	*			*
U240	2,4-D (2,4-Dichlorophenoxyacetic acid) and salts and esters	*			*
U242	No longer a code	*			
U243	Hexachloropropylene	*			*
U244	Thiram	*			*
U246	Cyanogen bromide				*
U247	Methoxychlor				*

U248	Warfarin & salts, when present at concentrations of 0.3% or less				*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
U249	Zinc phosphate, when present at concentrations of 10% or less				*
U271	Benomyl				*
U278	Bendiocarb				*
U279	Carbaryl				*
U280	Barban				*
U328	o-Toluidine				*
U353	p-Toluidine				*
U359	2-Ethoxythanol				*
U364	Bendiocarb phenol				*
U367	Carbofuran phenol				*
U372	Carbendazim				*
U373	Propham				*
U387	Prosulfocarb				*
U389	Triallate				*
U394	A2213				*
U395	Diethylene glycol, dicarbamate				*
U404	Triethylamine				*
U409	Thiophanate – methyl				*
U410	Thiodicarb				*
U411	Propoxur				*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
D001	Characteristic of ignitability				* only for ash
D002	Characteristic of corrosivity				* only for ash
D003	Characteristic of reactivity				* only for ash
D004	Arsenic	*	*		*
D005	Barium	*	*		*
D006	Cadmium	*	*		*
D007	Chromium	*	*		*
D008	Lead	*	*		*
D009	Mercury	*	*		*
D010	Selenium	*	*		*
D011	Silver	*	*		*
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethano naphthalene).	*	*		*
D013	Lindane (1,2,3,4,5,6-hexachloro-cyclohexane gamma isomer).	*	*		*
D014	Methoxychlor (1,1,1-Trichlor-2,2-bis (p-methoxyphenyl)ethane).	*	*		*
D015	Toxaphene (C10H10CL8 Technical chlorinated camphene, 67-69% chlorine).	*	*		*
D016	2,4-D (2,4-dichlorophenoxy acetic acid)	*	*		*
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid).	*	*		*
D018	Benzene		*		*
D019	Carbon tetrachloride		*		*
D020	Chlordane		*		*
D021	Chlorobenzene		*		*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
D022	Chloroform		*		*
D023	o-Cresol		*		*
D024	m-Cresol		*		*
D025	p-Cresol		*		*
D026	Cresol		*		*
D027	1,4-Dichlorobenzene		*		*
D028	1,2-Dichloroethane		*		*
D029	1,1-Dichloroethylene		*		*
D030	2,4-Dinitrotoluene		*		*
D031	Heptachlor (and its hydroxide)		*		*
D032	Hexachlorobenzene		*		*
D033	Hexachloro-1,3-butadiene		*		*
D034	Hexachloroethane		*		*
D035	Methyl ethyl ketone		*		*
D036	Nitrobenzene		*		*
D037	Pentachlorophenol		*		*
D038	Pyridine		*		*
D039	Tetrachloroethylene		*		*
D040	Trichloroethylene		*		*
D041	2,4,5-Trichlorophenol		*		*
D042	2,4,6-Trichlorophenol		*		*
D043	Vinyl Chloride		*		*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
001D	No longer a code	*			
003D	No longer a code	*			
001S	Aflatoxin	*			*
002S	2,3,7,8-Tetrachlorodibenzo-p-dioxin	*			*
003S	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	*			*
004S	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	*			*
005S	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	*			*
006S	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	*			*
007S	2,3,7,8-Tetrachlorodibenzo furan	*			*
001U	Actinomycin D	*			*
002U	Allyl chloride	*			*
003U	2-aminoanthraquinone	*			*
004U	Aminoazobenzene	*			*
005U	O-aminoazotoluene	*			*
006U	4-aminobiphenyl	*			*
007U	3-amino-9-ethyl carbazole	*			*
157U	3-amino-9-ethyl carbazole hydrochloride				*
008U	1-amino-2-methyl anthraquinone	*			*
009U	Anilazine	*			*
158U	Aniline hydrochloride				*
011U	o-Anisidine	*			*
012U	o-Anisidine hydrochloride	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
013U	Antimony (when in the form of particles 100 microns or less)	*			*
014U	Antimycin A	*			*
147U	Azinphos-ethyl	*			*
148U	Azinphos-methyl	*			*
159U	Azobenzene				*
015U	Barban	*			*
016U	Bendiocarb	*			*
017U	Benomyl	*			*
020U	Bromoxynil	*			*
160U	1,3-Butadiene				*
161U	Butyl benzyl phthalate				*
021U	2(p-tert-Butylphenoxy)-isopropyl-2-chloro-ethyl sulfite	*			*
022U	Captafol	*			*
023U	Captan	*			*
024U	Carbaryl	*			*
025U	Carbofuran	*			*
027U	Carbophenothion	*			*
028U	Chloramines	*			*
152U	Chlorfenuinphos	*			*
029U	Chloropyrifos	*			*
030U	Chlorinated dibenzofurans (other than those listed in Table 202)	*			*

031U	Chlorinated dioxins (other than those listed in Table 202)				*
WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
032U	Chlorine gas	*			*
033U	2-Chloroethanol	*			*
034U	3-(Chloromethyl) pyridine hydrochloride	*			*
150U	p-Chlorophenol	*			*
162U	1-Chloro-4-phenoxybenzene				*
036U	4-chloro-m-phenylenediamine	*			*
037U	4-Chloro-o-phenylenediamine	*			*
038U	Chloroprene	*			*
163U	1-Chloropropene				*
151U	5-Chloro-o-toluidene	*			*
040U	Clonitralid	*			*
041U	Cobalt (when in the form of particles 100 microns or less)	*			*
042U	Coumaphos	*			*
043U	p-Cresidine	*			*
044U	Crotoxyphos	*			*
046U	Cycloheximide	*			*
164U	p,p' DDE				*
047U	Demeton	*			*
048U	2,4-Diaminoanisole sulfate	*			*
049U	4,4'-Diaminodiphenyl ether	*			*
050U	2,4-Diaminotoluene	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
051U	Diazinon	*			*
052U	Dichlone	*			*
054U	Dichlorvos	*			*
055U	Dichrotophos	*			*
056U	Diethyl sulfate	*			*
165U	N,N1-Diethylthiourea				*
057U	Dinocap	*			*
058U	Dioxathion	*			*
059U	EPN	*			*
166U	1,2-Epoxybutane				*
061U	Ethion	*			*
063U	Fensulfothion	*			*
064U	Fenthion	*			*
065U	Fluchloralin	*			*
068U	Hexamethyl phosphoramidate	*			*
070U	Hydroquinone	*			*
071U	N-(2-Hydroxyethyl) ethyleneimine	*			*
072U	Hypochlorite	*			*
073U	Isonicotinic acid hydrazine	*			*
167U	Kanechlor C				*
074U	Ketene	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
075U	Lactonitril	*			*
076U	Leptophos	*			*
077U	Lithium and compounds	*			*
078U	Malachite green	*			*
079U	Malathion	*			*
080U	Mestranol	*			*
082U	4,4'-Methylenebis (2-methylaniline)	*			*
083U	4,4'-Methylenebis (N,N-dimethylaniline)	*			*
086U	1-Methylnaphthalene	*			*
088U	Mevinphos	*			*
089U	Mexacarbate	*			*
090U	Mirex	*			*
092U	Monocrotophos	*			*
093U	Mustard gas	*			*
094U	Naled	*			*
095U	1,5-Napthalenediamine	*			*
096U	Nickel (when in the form of 100 microns or less)	*			*
097U	Niridazole	*			*
098U	Nithiazide	*			*
099U	5-Nitroacenaphthene	*			*
100U	Nitro-o-anisidine	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
101U	Nitrobiphenyl	*			*
102U	Nitrofen	*			*
103U	N-(4-(5-nitro-2-furanyl)-2-thiazolyl)-acetamide	*			*
104U	Nitrogen mustard	*			*
106U	p-Nitrosodiphenylamine	*			*
168U	N-Nitromethylvinylamine				*
108U	N-nitroso-N-phenylhydroxylamine, ammonium salt	*			*
169U	Octachlorostyrene				*
110U	Oxydemeton-methyl	*			*
111U	Paraquat	*			*
112U	Peroxyacetic acid	*			*
113U	Phenazopyridine hydrochloride	*			*
114U	Phenesterin	*			*
115U	Phenolbarbitol	*			*
116U	Phenytoin	*			*
117U	Phenytoin sodium	*			*
118U	Phosazetim	*			*
119U	Phosmet	*			*
120U	Phosphamidon	*			*
121U	Piperonyl sulfoxide	*			*
122U	Polybrominated biphenyls (PBB)	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
124U	Propiolactone	*			*
127U	Propylthiouracil	*			*
128U	Rotenone	*			*
129U	Semicarbazide	*			*
170U	Semicarbazide				*
153U	Sodium fluoroacetate	*			*
131U	Styrene	*			*
132U	Sulfallate	*			*
134U	TDE	*			*
135U	TEPP	*			*
136U	Terbufos	*			*
137U	Tetrachlorovinphos	*			*
138U	4,4'-Thiodianiline	*			*
139U	0-Toluidine	*			*
140U	Triaryl phosphate esters	*			*
154U	Bis(tri-n-butyl tin) oxide	*			*
171U	Tributyltin (and other salts and esters)				*
172U	1,2,3-Trichlorobenzene				*
173U	1,2,4-Trichlorobenzene				*
141U	Trichlorfon	*			*
142U	Trifluralin	*			*

WASTE CODE	WASTE DESCRIPTION OR CHEMICAL NAME	ORIGINAL	AMEND #1	AMEND #2	FACIL/INC PERMIT
143U	2,4,5-Trimethylaniline	*			*
144U	Triamethylphosphate	*			*
174U	Urethane				*
175U	Vinyl bromide				*
155U	Vinylidene chloride	*			*
146U	Ziram	*			*